

Protective Factors Against Suicidal Ideation Among Community-Dwelling Older Adults

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DEDICATION

I dedicate this dissertation to my Lord -- heavenly Father, Jesus Christ and Holy Spirit--.
You have led me to here. You have provided everything for me. You have accomplished all.
Everything is the grace of God. Thank you, Lord. I give you all my thanks and praise your
glorious name. I love you, my Abba Father.

**“So do not fear, for I am with you; do not be dismayed, for I am your God. I will strengthen
you and help you; I will uphold you with my righteous right hand”.**

ISAIAH 41:10

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ABSTRACT

Suicide is a serious public health issue in the world (Ra & Cho, 2013). Studies reveal that suicidal ideation may be signal of suicidal actions (Oh, Lee, & Shin, 2014; Park, Cho, & Moon, 2010). Studies also report that about more than 30% of older adults who had serious suicidal ideation made suicide plans (Choi, DiNitto, & Marti, 2015). This means we may prevent suicidal behaviors by reducing suicidal thoughts (Choi et al., 2015; Eom, 2007; Harwood & Jacoby, 2000; Jeong & Kim, 2014; Simons & Murphy, 1985).

Intimate Partner Violence among older adults is anticipated to intensify as baby boomers age (Roberto, McPherson, & Brossoie, 2013). IPV negatively influences the mental health of victims, both men and women (Campbell, 2002; Carbone-López, Kruttschnitt, & Macmillan, 2006). Studies show female victims of IPV are at risk of depression in the future even if the IPV stopped (Chuang et al., 2012). Although depression is the critical risk factor for suicidal ideation, some factors may save older adults with depressive symptoms against suicidal ideation (Lee, 2011). However, there is little research examining protective factors against suicidal ideation among older victims of intimate partner violence. The present dissertation consists of three independent papers. The first chapter addresses factors protecting against suicidal ideation among community-dwelling older adults in the U.S. and South Korea: a systematic literature review, the second chapter addresses the impact of protective factors on suicidal ideation among community-dwelling older adults with experience of spousal physical abuse: focusing on direct and indirect effects, and the third chapter addresses the impact of spousal physical abuse on suicidal ideation: focusing on moderating effects of protective factors.

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INTRODUCTION

Suicide is a critical social and public health problem in the world (Ra & Cho, 2013). Suicide in later life tends to be well planned (Crocker, Clare, & Evans, 2006), and the rate of completion is high in comparison to younger age groups (Kim et al., 2011; Kim, Jang & Seo., 2011). Researchers have reported that suicidal ideation may be harbinger of suicidal actions (Oh, Lee, & Shin, 2014; Park, Cho, & Moon, 2010). Researchers also have found that about more than 30% of older adults who had serious suicidal ideation made suicide plans (Choi, DiNitto, & Marti, 2015). This means we may prevent suicidal behaviors by decreasing suicidal ideation (Choi et al., 2015; Eom, 2007; Harwood & Jacoby, 2000; Jeong & Kim, 2014; Simons & Murphy, 1985).

Moreover, Intimate Partner Violence among older adults is expected to rise as baby boomers age (Roberto, McPherson, & Brossoie, 2013). IPV negatively impacts the mental health of victims, both men and women (Campbell, 2002; Carbone-López, Kruttschnitt, & Macmillan, 2006). Researchers report that female victims of IPV are at risk of depression in the future even if the IPV stopped (Chuang et al., 2012). This depression may trigger suicidal behaviors, including suicidal ideation (Devries et al., 2013; Golding, 1999; Kramer, Lorenzon, & Mueller, 2004; Romito & Grassi, 2007; Thompson, Kaslow, & Kingree, 2002). Although depression is the powerful risk factor for suicidal ideation, some factors may protect older adults with depressive symptoms against suicidal ideation (Lee, 2011). However, there is little research investigating protective factors against suicidal ideation among older victims of intimate partner violence in the community. The present dissertation consists of three independent papers. The first chapter addresses factors protecting against suicidal ideation among community-dwelling older adults in the U.S. and South Korea: a systematic literature review, the second chapter addresses the

impact of protective factors on suicidal ideation among community- dwelling older adults with experience of spousal physical abuse: focusing on direct and indirect effects, and the third chapter addresses the impact of spousal physical abuse on suicidal ideation: focusing on moderating effects of protective factors.

Chapter I

Factors Protecting Against Suicidal Ideation Among Community-Dwelling Older Adults in the U.S. and South Korea: A Systematic Literature Review

Chapter 1, in part is a reprint of the material as it appears in *Journal of Gerontological Social Work*, 2018. Authors: Sukyung Yoon & Sherry Cummings. The dissertation author was the primary investigator and author of this paper.

Yoon, S., & Cummings, S. Factors Protecting against Suicidal Ideation in South Korean Community-Dwelling Older Adults: A Systematic Literature Review. *Journal of Gerontological Social Work*, <https://www.tandfonline.com/doi/full/10.1080/01634372.2018.1557310>

Abstract

This systematic literature review examines protective factors against suicidal ideation among community-dwelling older adults from South Korea and the United States. A substantial body of research exists focusing on risk factors for suicidal ideation among community-dwelling older adults. Far fewer studies, however, have focused on protective factors. In addition, the majority of studies investigate individual and social factors rather than macro factors. Suicidal ideation in later life tends to result from multiple and complex processes over a long time. Applying an ecological frame (Bronfenbrenner, 1979), this synthesis of 69 studies has yielded four levels of protective factors against suicidal ideation among community-dwelling older adults in South Korea and the U.S: individual; family; community and macro level factors.

Keywords: protective factors, suicidal ideation, older adults, ecological frame

Introduction

Suicide is a serious social and public health issue worldwide (Ra & Cho, 2013). According to World Health Organization, suicidal mortality rates in 2012 were 13.7 per 100,000 in the United States and 36.8 per 100,000 in South Korea respectively (Organization, 2016, p. 63). The highest risk age group for suicide in the United States is adults ages 65 and older (Edelstein et al., 2009b). In the United States, suicide in later life causes one death every 95 minutes (Lange, 2003). The suicide rate in South Korea in 2009 was the highest among the 34 countries in the Organization for Economic Cooperation and Development (OECD, 2016). About one-third of the people who died by suicide in 2014 in South Korea were ages 60 and over (StatisticsKorea, 2015).

Suicide in the elderly tends to be well planned (Crocker, Clare, & Evans, 2006), and the rate of the completion is high (S. Kim, Jang, & Seo, 2011). This means attempted suicide among older adults is not impulsive but intentional (J. Jeong & J. Kim, 2015). In comparison to other age groups, it takes older adults a longer amount of time to act on their suicidal ideation with suicidal behaviors (J. Bae & Um, 2009).

There has been increasing understanding that suicidal ideation is a significant step toward suicidal actions (Y. E. Oh, Lee, & Shin, 2014). One study found that nearly a third of older adults who had serious suicidal thoughts made suicide plans (N. G. Choi, DiNitto, & Marti, 2015). This suggests that we may prevent suicide by reducing suicidal ideation (N. G. Choi et al., 2015; Eom, 2007; Harwood & Jacoby, 2000; Jeong & Kim, 2014; Simons & Murphy, 1985). As mentioned above, suicide in later life is not impulsive: it takes time for older adults to move from suicidal ideation to suicide attempts. This time gap between thought and action presents an opportunity: we can intervene to prevent suicide attempts in older adults if we can find factors to

reduce or stop suicidal ideation (Jeong & Kim, 2014).

Understanding risk factors for suicidal ideation is very important to prevent suicidal ideation. However, for community-dwelling older adults, understanding protective factors against suicidal ideation may be an even more effective and efficient way to reduce or prevent suicidal ideation, since many of the risk factors for this group are beyond their control, such as race, ethnicity, physical limitations, experiences of attempt suicide in the past or having a family member who already committed suicide (Eom, 2007; Kwon, Kim, & Um, 2011). To date, most research on suicide ideation among community-dwelling older adults has focused on risk factors (Crocker et al., 2006; HS Kim & Heo, 2010; MH Kim & Kim, 2011; Lincoln, Taylor, Chatters, & Joe, 2012). Among the few studies on protective factors, the majority have focused on individual and micro-level social support factors. There are few studies that include macro level factors. (Dong, Chang, Zeng, & Simon, 2015; Fässberg et al., 2012; Heisel, 2006; Lapierre et al., 2011; Neufeld, Hirdes, Perlman, & Rabinowitz, 2015). or the complex interaction processes between micro and macro factors, which may be mediated by long-lasting and complex social conditions (Eom, 2007; HS Kim & Heo, 2010; MoScicki, 1995). There are also few studies comparing protective factors against suicidal ideation among community dwelling older adults in different countries (HS Kim & Heo, 2010). Over the past twenty years from 1990 to 2009, US and South Korea demonstrated diverging trends in suicide rates : the US's rates decreased while South Korea's rates increased among members of OECD (H.-S. Kim, 2016). This divergence in suicidal rates warrants research attention. Yet, no comparative research exists about protective factors against suicidal ideation between South Korea and the United States among older adults living in the community.

There is a growing awareness among researchers that macro social and country level

factors are critical to understanding how to protect older adults against suicidal ideation in later life (Doh & Hoe, 2015; Eom, 2007; HS Kim & Heo, 2010; H. Lee, Kim, Choi, & Choi, 2014; M Lee, 2015; Y. D. Song, Son, & Park, 2010).

Bronfenbrenner's (Bronfenbrenner, 1979) ecological perspective provides a comprehensive framework for considering interaction processes among different levels of factors from the individual to the environment. His frame work helps inform researchers' understanding of elderly suicidal ideation, which tends to arise from the interaction with many different levels of factors over long periods of time (Doh & Hoe, 2015; Eom, 2007; H. Lee et al., 2014; M Lee, 2015). Bronfenbrenner's model proposes a microsystem consisting of environments in which individuals are able to easily interact in-person with others such as home, school and work. At the next level, the mesosystem consists of connections between two or more settings, such as home, senior centers or work, with neighbors or friends, or in other social settings. The exosystem consists of indirect relations among individuals in settings such as family members' workplaces or adult children' networks of friends. Lastly, the macro system exists at the level of subcultures or cultures propounding beliefs or ideologies.

This systematic literature review study aims to 1) investigate protective factors against suicidal ideation among older adults living in the community by using an ecological frame (Bronfenbrenner, 1979); 2) provide a comparative study of protective factors against suicidal ideation among community-dwelling older adults living in South Korea and the U.S.

Method

This systematic literature review followed the Cochrane Guidelines (Front Matter, 2008). A literature search was conducted using the major databases Psychinfo, Web of Science, Cinahl, Scopus and PubMed among journals written in English. To locate studies in Korean, a

literature search was conducted using major databases RISS, KISS, and DBpia in Korean. Search terms included: ("suicidal ideation" OR "death desire" OR "death thoughts") AND ("older adults" OR "elderly") AND ("protective factor" OR "buffer effect"). The article search range date was from January 2000 to January 2016. All articles that met the following criteria were selected for review: 1) peer reviewed; 2) published in English or Korean; 3) sample population of community-dwelling adults living in Korea or America (ages 50+). This search was carried out from December 2015 to January 2016. Applying Bronfenbrenner's Ecological Model (1979), this research organized factors into four levels: 1) individual level – individual internal and external conditions; 2) family level – family relevant conditions; 3) community level – neighbors, friends, and community conditions and 4) macro level – governmental policies and supporting services, living areas, attitudes toward aging in society and cultures, changes at the country level, etc.

Results

Countries of Origin

Initially over 300 articles were identified. Articles were excluded if they addressed only risk factors for suicidal actions without suicidal ideation, older adults who did not live in the community, or research populations that were not older adults living in Korea or America. A total of 69 studies remained: South Korea (61) and US (8). Among the studies from South Korea, there were two on older Korean Americans and one that compared older Koreans to older Korean-Canadians. Manuscripts were written in either English or Korean.

Data Source

Of the 69 studies, 51 used surveys, 16 used secondary data sets and two used a qualitative research approach. Of the Korean studies, 46 used surveys, 13 used secondary data

sets and two used a qualitative approach. As for research in U.S, five conducted surveys and three used secondary data sets.

Measures of Suicidal Ideation

The studies used a variety of measures to assess suicidal ideation (See Table 1-1). Of the 69 studies, 24 used measures based on the Beck, Kovacs and Weissman (1979) Scale for Suicidal Ideation (SSI) (Beck, Kovacs, & Weissman, 1979) and 18 used the Harlow, Newcomb and Bentler (1986) Suicide Ideation Scale (SIS) (Harlow, Newcomb, & Bentler, 1986). Twelve studies used binary questions. Most secondary data sets used binary questions; however, the time-range for which respondents were asked to report on thoughts of suicide varied from one year to any time after the respondents turned 60 or 61 years of age. Among studies in Korea, the majority used either the Beck, Kovacs and Weissman (1979) Scale for Suicidal Ideation or the Harlow, Newcomb and Bentler (1986) Suicide Ideation Scale (SIS). In contrast, studies in America used a wide variety of measures, including the Geriatric Suicide Ideation Scale- Suicide Ideation Subscale (GSIS-SI) (Heisel & Flett, 2006), the suicidal thoughts items from the Montgomery – Asberg Depression Rating Scale (Montgomery & Asberg, 1979) and the Hopkins Symptoms Checklist (HSCL-20). The only common measure used by researchers in both South Korea and the U.S was the Geriatric Suicide Ideation Scale.

Theories Applied to Research Models

While most researchers included in their introductions some discussion of theoretical frameworks, far fewer actually applied a specific theoretical framework to test their hypotheses (HS Kim & Heo, 2010). Theories invoked in studies' research models included the Interpersonal Theory of Suicide (Joiner Jr, Brown, & Wingate, 2005), the Stress-Vulnerability Model (Rozanov & Carli, 2012), the Escape Theory (Baumeister, 1990), the Eco-System

Approach(Kemp, 1998), the Psychological Theory (Osgood & McIntosh, 1986), Social Network Theory (Antonucci & Israel, 1986), the Suicide Theory (Baumeister, 1990) and Sociological Theory (Durkheim, 1951). Of the 61 studies in Korea, eighteen studies (30%) applied specific theoretical frames to their research models and of the 8 U.S. studies, half applied specific theoretical frames. As Table 1-1 shows, researchers employed a variety of theoretical frameworks; however, overall 68% studies were conducted without grounding in any particular theory.

Methods of Data Analyses

Researchers used various analysis methods depending on their research questions. (See Table 1-1). Primary data analysis methods employed included Structural Equation Modeling, Path Analysis, Multiple Regression, General Linear Modeling, Multivariate Logistic Regression, Hierarchical Multiple Regression, ANCOVA, ANOVA, *t*-test, Content Analysis, Phenomenological Research Method, and Thematic Analysis. Both Korean and U.S. studies used Logistic regression and multiple regression were used frequently in both Korean and U.S. studies. However, Korean studies also frequently employed Structural Equation Modeling and Path Analysis. Having provided an overview of previous research, it is time to move to the primary purpose of this research, protective factors against suicidal ideation among community dwelling older adults.

Protective Factors against Suicidal Ideation

This research reviews evidence of protective factors against suicidal ideation among community-dwelling older adults. It presents the results according to four levels of protective factors. Protective factors are variables that may directly or indirectly influence suicidal ideation. Indirect factors fall into two categories: moderators and mediators. A moderator changes the

direction or magnitude of the association between an independent variable and a dependent variable. In other words, if the moderator works significantly, we can say there are interaction effects (Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004). A mediator is a factor that predicts or causes a dependent variable. A mediator describes the association between an independent variable and a dependent variable (Baron & Kenny, 1986; Frazier et al., 2004). Investigating moderators and mediators against suicidal ideation may yield more effective and efficient interventions to prevent suicidal ideation for community-dwelling older adults (Baron & Kenny, 1986; Frazier et al., 2004).

Individual Protective Factors

Findings of the review are shown in Table 1-1. Of the 69 studies, 42 (83%) investigated individual protective factors either directly or indirectly. Of the 61 Korean studies, 35 (57%) were focused on individual factors while seven (88%) of the eight U.S. studies examined individual factors. Suicide researchers have suggested that individuals' internal and external characteristics may protect against suicidal ideation. Such characteristics include spirituality, coping strategies, self-esteem and health (Cheavens, Cukrowicz, Hansen, & Mitchell, 2016; J. Choi, 2010; G. Kim & Hwang, 2009; Levy, Pilver, & Pietrzak, 2014; Marty, Segal, & Coolidge, 2010; C.-S. Oh, 2012; B Park & Song, 2014).

Social Activity. Nine studies have shown that social activity among the elderly is a protective factor, either directly or indirectly. Yi and Lee (2009) demonstrated that participating in leisure sport activities negatively influenced suicidal ideation, depression, and stress among Korean older adults. Participating in leisure sports had positive buffering effects both between stress and depression, and between depression and suicidal ideation (Yi & Lee, 2009). Lee & Lee's (2010) finding was consistent, in that older adults participating in leisure

sports were less likely to have suicidal ideation than those who did not participate (J. Lee & Lee, 2010). A study to examine the role of social activity as a mediator between social isolation and suicidal ideation among 830 Korean older adults (M Lee, 2012) indicated that social isolation of the elderly had a direct relationship to suicidal ideation, and that social activity negatively mediated between social isolation and suicidal ideation. Moreover, Kim and Shin's (2013) research, based on Seoul Welfare Panel Data 2nd Wave, demonstrated that social participation had a moderating effect between depression and suicidal ideation among 1,429 older adults (M.-I. Kim & Shin, 2013). In a study of 796 older adults living alone in South Korea, Kim and Shin (2015) found that the harmful effect of suffering from loss and depression varied depending on the degree of social activity in which the older adults participated (J. W. Kim & Shin, 2015). Older adults who were engaged in more social activities had lower rates of depression and suicidal ideation, when compared to older adults who engaged in fewer social activities. Thus, they concluded that participating in social activities works as a moderator between loss and depression and suicidal ideation for elderly living alone. Park & Park (2015) conducted research to identify the causal relationship between a sense of loss and suicidal ideation (H.-S. Park & Park, 2015). They investigated the mediating influence of social participation and disabilities-acceptance among 318 community-dwelling disabled older adults in South Korea. Their results showed that the impact of sense of loss on suicidal ideation among the community-dwelling older adults was negatively mediated by social participation and disability acceptance. A study by Park (2009) of negative life stress and suicidal ideation in community-dwelling older Korean adults reported that social participation and self-efficacy had compensatory and buffering effects on the relationship between negative stress and suicidal ideation (M. J. Park, 2009). Bae et al., (2005) reported that older adults with higher social activity, family cohesion and less ageism had

lower rates of depression and suicidal ideation (J. Y. Bae, Kim, & Yoon, 2005).

Spirituality/ Religiosity. Five studies have revealed spirituality and religiosity to be both direct and indirect protective factors against suicidal ideation among older adults living in community in various and vulnerable contexts both in Korea (3) and the U.S (2).

A study by Kim et al. (2013) found that spirituality worked as a moderator, reducing levels of suicidal ideation under heavy subjective stress among 836 community-dwelling older Korean adults. Older adults with high spirituality were less likely to have increased suicidal ideation under severe subjective stress in comparison to older adults with low spirituality (M.-I. Kim & Shin, 2013). Even though there was no significant difference between older adults with high spirituality and older adults with low spirituality under minor subjective stress, spirituality alleviated suicidal ideation under conditions of heavy subjective stress. The researchers emphasized that spirituality is different from religiosity. They defined spirituality as a relationship with God that is a personal and individual interaction with God, rather than organizational or institutional activities. Park (2014) found that spirituality measured by the Spiritual Well-being Scale (Paloutzian & Ellison, 1991) moderated the relationship between sense of isolation and suicidal ideation among 603 older adults living alone in South Korea (BG Park, 2014). Older adults with high spirituality were less likely to have suicidal ideation compared to older adults with low spirituality. Park and Hur (2013) identified the influence of depression on suicidal ideation with religiosity as a moderating effect among 319 Korean older adults (S. Park & Hur, 2013). In the study, religiosity was divided into three categories: organizational, private and subjective. The results revealed that subjective religiosity had a direct and negative relationship with suicidal ideation. Also, there was a moderating effect of private religiosity (i.e. spirituality) on the impact of depression on suicidal ideation. Moreover, two

qualitative studies reported that help, support and teaching from churches and church members including church friends, small group leaders and pastors, as well as religious belief, led to reduced suicidal ideation among older Korean immigrants in the U.S. and older adults in South Korea (Jo & Kim, 2008; Jo & Sohn, 2011).

However, U.S researchers found that among 248 depressed older adults in U.S. only church attendance was directly related to lower current suicidal ideation, and perceived social support partially mediated this relationship (Rushing, Corsentino, Hames, Sachs-Ericsson, & Steffens, 2013). June et al., (2009) demonstrated that high religiousness measured by the Brief Multidimensional Measure of Religiousness/Spirituality (Group, 1999) was related to less suicidal ideation and more perceived reasons for living (June, Segal, Coolidge, & Klebe, 2009). In addition, ethnicity had a moderating effect. African Americans had a stronger association between religiousness and reasons for living than European Americans.

Living Arrangement. Six studies in Korea have demonstrated that suicidal ideation can be affected by living arrangement. Sohn (2012) compared suicidal ideation, depression, hopelessness, illness and self-esteem in 190 older adults living alone to the same factors in 188 older adults living with family in South Korea (Sohn, 2012). The results showed that older adults living alone had higher scores for suicidal ideation, depression, hopelessness, and illness than older adults living with family. Oh et al., (2014) reported similar results in their study of the influence of the social network structure on suicidal ideation of 522 older adults in single and couple households in South Korea (Y. E. Oh et al., 2014).

Using the third Korea National Health and Nutrition Survey of 4,051 participants ages 65 and over, Kim (2009) found that there was no difference in suicidal ideation between older women living alone and those living with others; however, older women living alone had lower

perceived stress in comparison to older women living with others. As for male older adults, older men living alone had higher suicidal thinking and perceived stress than older men living with family or others (Y.-J. Kim, 2009). Also, using the fourth Korea National Health and Nutrition Survey, researchers demonstrated that older male adults living alone were more likely to experience suicidal ideation (3.2 times) and depressive symptom (4 times) than older adults living with a spouse. However, another study showed that there was not a statistically significant difference in suicidal thinking and depressive symptoms between older female adults living alone and older female adults living with a spouse (S.-S. Han, Kang, & Jeong, 2012; K. Kim et al., 2011; MH Kim & Kim, 2011). The Song et al. (2010) study regarding older adults living alone in South Korea had different results. It indicated that older adults living alone who had children or grandchildren tended to have more suicidal ideation than did older adults living alone who had no children or grandchildren (Y. D. Song et al., 2010).

Coping Strategies. Eight studies have revealed that coping strategies have worked as direct and indirect protective factors in diverse contexts especially under stressful situations among community-dwelling older adults both in Korea (6) and the U. S (2).

Several studies have shown that among Korean older adults, coping strategies of stress negatively mediated the relationship between stress and suicidal ideation (MY Lee & Nam, 2007; Y. Song, Son, & Nam, 2013). Chun & Ahn (2011) studied coping strategies as moderators between stressful life events and suicidal ideation among South Korean elderly living alone and those living with others (Chun & Ahn, 2011). They found that active coping had a negative direct effect on suicidal ideation among older adults living alone. Also, active coping had a moderating effect that varied depending on the intensity of stressors. Research on loneliness and suicidal ideation according to character type in the elderly conducted by Bang (2014) found that among

community-dwelling older adults in South Korea, active integrated “copers” were less likely to have loneliness and suicidal ideation than failing “overcopers” and self-negating “undercopers”(Bang, 2014). Researchers reported that abuse experience was positively associated with suicidal ideation with coping behavior as a moderating effect. Active coping was a protective factor against suicidal ideation among older Korean adults (Jeong & Kim, 2014; J. Jeong & J. Kim, 2015).

Studies in U.S, found that problem- and emotion-focused coping related positively with perceived reasons for living and negatively with suicide ideation in community-dwelling older adults in the U.S (Marty et al., 2010). Resisting negative age stereotypes and proper knowledge about aging worked as protective factors both in South Korea and the U.S (G. Kim & Hwang, 2009; Levy et al., 2014).

Self – Esteem. Four studies have revealed that self-esteem works as protective factors directly and indirectly against suicidal ideation among community-dwelling older adults in various contexts. Park and Chun (2006) found that positive self-esteem had a strong negative influence on both depression and suicidal ideation among older Korean adults and Korean immigrants in Toronto (B. G. Park & Chun, 2006). A study of suicidal ideation in the elderly conducted by Kim and Kim (2007) demonstrated that high self-esteem was negatively associated with suicidal ideation in the 183 Korean elderly survey respondents (HS Kim & Kim, 2007). Kim and Hwang (2009) examined how the respondents’ level of knowledge about aging influenced suicidal ideation with mediating effects of self-esteem (negative) by surveying 585 elderly Koreans. Self-esteem had a negative impact on suicidal ideation directly and indirectly (G. Kim & Hwang, 2009). Also, Park’s (2008) study showed that among 273 community elderly, the level of self-esteem, life events, and family communication had moderating effects

on the relationship between depression and suicidal ideation (BG Park, 2008). The most powerful variable, in Park's (2008) estimation, was self-esteem.

Health. Some researchers have found that older adults with high perceived health were less likely to have suicidal ideation than those with low perceived health. Kim and Choi (2007) showed that subjective perceived physical health significantly predicted suicidal ideation controlling for demographic variables and depression; however, the relationship between physical health and suicidal ideation was moderated by depression (SH Kim & Choi, 2007). Kim et al., (2011) reported that older adults with better ADL (Activities of Daily Living) and good subjective mental health were less likely to have depression and suicidal ideation. Good ADL was the most significant defense against suicidal ideation for older adults (SH Kim & Choi, 2007). Others also found that high perceived health among older adults acted as a protective factor against suicidal ideation (Eom, 2007; Kwak, Ko, & Kim, 2013; M Lee, 2012; C.-S. Oh, 2012; B Park & Song, 2014; J.-S. Park & Kim, 2014; J. Park, Park, Jeong, Lee, & Kim, 2014; Yang & Moon, 2012).

Economic Situation. Researchers have found that older Korean adults with low economic status are more likely to have suicidal ideation. Economic status had a stronger impact on suicidal ideation for older male adults than for older female adults (K. Kim et al., 2011; S. Kim et al., 2011; Y. E. Oh et al., 2014; Yang & Moon, 2012). In addition, economic status had a stronger influence on older adults living alone than on older adults living with a spouse (Y. E. Oh et al., 2014). Economic status had a positive impact on self-esteem, and this self-esteem negatively influenced suicidal ideation among community dwelling older adults in South Korea (H. Seo & Jung, 2010).

Age. Research has yielded conflicting results concerning the relationship between

age and suicidal ideation. Yang and Moon (2012) showed that, among Korean American immigrant older adults, those in the old-old group who had high social support were less likely to have suicidal ideation in comparison to those in the young-old group with high social support (Yang & Moon, 2012). However, those in the young-old group with high acculturation was less likely to have suicidal ideation than those in the old-old group with high acculturation. The researchers found that, overall, the group ages 65-74 had lower suicidal ideation than did the group ages 80 and over. In addition, Lee et al., (2014) showed that age had a significant positive relationship with suicidal ideation among community-dwelling South Korean older adults (H. Lee et al., 2014). In contrast, Lee (2015) reported that among 10,003 older Korean adults taking the 2011 Elderly Living Condition Survey, age had a significantly negative relationship with suicidal ideation (M Lee, 2015). In addition, Do and Hoe (2015) demonstrated that younger older adults were more likely to have higher suicidal ideation (Doh & Hoe, 2015). However, the research of Park & Kim (2014), Seo & Jung (2010) and Park & Chun (2006) showed that among older Korean adults, there was no relationship between age and suicidal ideation (B. G. Park & Chun, 2006; J.-S. Park & Kim, 2014; H. Seo & Jung, 2010). Ahn (2012) found that age worked as moderator between social support, acculturation and suicidal ideation among the young-old (ages from 65 to 74) and the old-old (ages 75 and over) among older South Korean immigrants in the U.S (Ahn, 2012).

Other Individual Factors. Other individual factors have been found to protect against suicidal ideation in older adults. While these factors do not have the research support of multiple studies, they are mentioned here for the reader's information. Regarding other individual factors related to suicidal ideation among older adults in South Korea, self-efficacy, resilience, meaning of life, ethnic identity, enjoying one's hobbies and cellular phone possession

have been found to work as protective factors and moderators against suicidal ideation (J. Choi, 2010; Jo & Sohn, 2011; HJ Kim & Kwon, 2012; MY Kim, 2010; Y.-J. Lee, 2013; J.-S. Park & Kim, 2014; M. J. Park, 2009; Yang & Moon, 2012). Studies in the U.S showed that positive affect (Hirsch, Duberstein, Chapman, & Lyness, 2007), self-forgiveness (Cheavens et al., 2016), and effective depression treatment (Vannoy et al., 2007) acted as protective factors against suicidal ideation among community dwelling older adults.

In summary, researchers have revealed coping strategies, living arrangements, spirituality/religiosity, self-esteem, health, economic situation, age, as representative individual protective factors against suicidal ideation among community dwelling older adults.

Family Level Protective Factors

Of the 69 studies, 15 (22%) investigated family relevant protective factors. Of these 15 studies, 14 (93%) were from South Korea and 1 (7%) study was from the U.S. Findings of the review are shown in Table 1. 1

Family is one of the most important elements in every individual's life. Strong family relations can support emotional and physical health as well as provide financial stability. Family structure and the quality of relationships among family members, such as a spouse and children, may play a crucial role in protecting community-dwelling older adults against suicidal ideation (Chen et al., 2008; Conwell, Duberstein, & Caine, 2002; Doh & Hoe, 2015; S. Han, Kang, Yoo, & Phee, 2009; H. Lee et al., 2014; H. K. Lee & Chang, 2012 ; O'Dwyer, Moyle, & Van Wyk, 2013; Y. D. Song et al., 2010).

Support from Family. Eight studies have revealed that support from family works both directly and indirectly as a protective factor against suicidal ideation among community dwelling older adults both in Korea and in the U.S. Jung and Kim (2014) found that

family solidarity between older parents and adult children in South Korea had a significant and negative impact on the older adults' suicidal ideation (Jung & Kim, 2014). Kim's (2010) research regarding the influence of psychological factors on suicidal thoughts was consistent with this finding: among 264 Korean older adults, those meeting with their adult children and friends often were less likely to have suicidal ideation (MY Kim, 2010). Oh et al., (2014) found that among 522 older adults in Korea, a spouse was the most supportive network links for older male adults; however, children were the most supportive network links for older female adults. Children were also the most supportive network links for older adults living alone. At the same time, children were the source of the most conflictive networks for both older adults living alone and living with a spouse. Elderly people with smaller conflictive networks and larger numbers of children were less likely to have suicidal ideation whether they lived alone or in families (Y. E. Oh et al., 2014). Park & Kim (2014) showed that among older Korean adults, familism was negatively associated with suicidal ideation (J.-S. Park & Kim, 2014). Seo & Jung (2010) likewise reported that Lee (2011) found that among 359 older Korean adults, support from a spouse and children reduced the influence of depression on suicidal ideation (I. Lee, 2011; H. Seo & Jung, 2010). That is, family support moderated between depression and suicidal ideation. Kim & Park (2010) reported that 800 older Korean adults with higher support from family, relatives and friends were less likely to have suicidal ideation (D.B Kim & Park, 2010). A qualitative study in Korea reported that suicidal ideation associated with serious illness was overcome due to support from family such as a spouse (Jo & Kim, 2008). Research about suicidal ideation among older adults caring for chronic invalids in South Korea demonstrated that older family caregivers with family support were less likely to have suicidal ideation than their counterparts (S. A. Choi & Ha, 2012). Older adults with higher family cohesion, lower

ageism and higher social activity had lower depression and suicidal ideation (J. Y. Bae et al., 2005). In addition, regarding elderly single and couple households in South Korea (Y. E. Oh et al., 2014). Lee & Jung's (2013) study on how family resilience influenced depression and suicidal thoughts among older adults showed that family resilience, characterized by a robust belief system, organization processes and communication processes, lowered depression and suicidal thoughts. Family resources and communication reduced suicidal ideation effectively among older Korean adults (Y.-J. Lee, 2013).

Research in the U.S. has shown that perceived emotional support from family members is a protective factor against suicidal ideation among both Caribbean Blacks and African Americans. Lincoln et al. (2012) found that ethnicity had a moderating effect in that Caribbean black older adults with more frequent emotional support from family had significantly lowered risk of suicide attempts than African American older adults (Lincoln et al., 2012).

Marriage Status and Quality of Marriage. Six studies have demonstrated that marriage status and quality of marriage act as protective factors. Researchers found that older adults living with their spouses were less likely to have suicidal ideation (Doh & Hoe, 2015; S. Han et al., 2009; K. Kim et al., 2011; S. Kim et al., 2011; H. Lee et al., 2014; Sohn, 2012). Researchers found that marital satisfaction had both direct and indirect effects on suicidal ideation. Older adults with higher marital satisfaction had lower suicidal ideation. Depression partially mediated the relationship between marital satisfaction and suicidal ideation (S. Kim et al., 2011). Park and Yook investigated the influence of stress from spousal bereavement among Korean older adults. They demonstrated that older adults with low marital intimacy and high bereavement stress had high levels of depression and suicidal ideation (H. Park & Yook, 2013). The family structure had more effect on female older adults than on male older adults. When the

researchers controlled for gender, age, and economic standard of living, however, psycho-social factors had a stronger impact on suicidal ideation than did family structure (K. Kim et al., 2011).

Responsibility for Family and Children. Three studies have revealed that responsibility for family and children works as a protective factor. Research on suicidal ideation among older adults caring for chronic invalids found that 274 older Korean adults caring for adult children suffering cancer or other illnesses were less likely to have suicidal thoughts than older adults caring for spouses or their own parents (S. A. Choi & Ha, 2012). Two qualitative studies of older Korean adults who had attempted suicide and suffered from suicide ideation reported that worrying about their children's future worked as a protective factor against suicidal ideation (Jo & Kim, 2008; Jo & Sohn, 2011).

In summary, many studies have established that family level factors such as marital status, marriage quality, family solidarity, relationship with adult children and grandchildren, family resilience, responsibility for family and children and support from family members work as protective factors against suicidal ideation among older adults living in community. Family is a crucial protective factor both in South Korea and in the U.S.

Community Level Protective Factors

Of the 69 studies, 14 (20%) investigated community level protective factors. Of the 14 studies, 12 (86%) were from South Korea and two (14%) studies were from the U.S. Among the growing aging populations in both countries, the number of single elderly households has been sharply increasing due to reasons such as spousal death, divorce, bad relationships with family members, and other personal issues (J. W. Kim & Shin, 2015; B Park & Song, 2014; Y. D. Song et al., 2010). In addition, loss of social status and changes of social roles among older adults may increase suicidal risk (H. S. Kim, 2002). Research has shown that social support is a significant

factor for individuals' mental and physical health under psychological and life challenging conditions (Chronister, Johnson, & Berven, 2006). This study presents overall support from neighbors, friends, agencies, professions etc. as community-level protective factors against suicidal ideation. Findings of the review are shown in Table 1-1.

Social support from friends and neighbors has been shown to have a buffering effect between depression and suicidal ideation among the elderly in South Korea. Support from friends alleviated the influence of depression on suicidal ideation among community-dwelling older adults (J. Y. Bae et al., 2005). Seo & Ko indicated that the stress and depression of 969 older adults with abuse experiences in Korea increased suicidal ideation; however, support from friends alleviated it (I. Seo & Ko, 2011). Joe and Kim (2008) found that there were significantly different scores for suicidal ideation in Korea between older adults with many friends or several friends and older adults with few friends (Jo & Kim, 2008). Eom (2007) found that among 297 older adults, social support was a moderator between depression and suicidal ideation. Specifically, social support had a greater effect on older adults with higher depression scores than on older adults with lower depression scores. After controlling for demographic variables, social support had a significant influence on suicidal ideation (Eom, 2007). Lee & Cho (2013) demonstrated that among 399 community-dwelling older adults living alone in Korea, higher levels of social support lowered levels of depression and led to reduce suicidal ideation. Social support had an indirect effect on suicidal ideation by mediating depression (G.-y. Lee & Cho, 2013). Park & Song (2014) found that older adults living alone with low social support had higher levels of stress, loneliness, and suicidal ideation than did older adults living alone with high social support. For older adults living alone with high social support, loneliness did not have a significant influence on suicidal ideation; however, higher loneliness strengthened

suicidal ideation for older adults living alone with low social support. Social support worked as a moderator between loneliness and suicidal ideation (B Park & Song, 2014). Lee and Kwon (2015) found that levels of social support had a significant impact on suicidal ideation among 303 bereaved Korean single-household older adults. Social support significantly moderated between levels of grief and suicidal ideation in this population (H. K Lee & Kwon, 2015). Yang and Moon (2012) reported that among 123 older Korean adults, social support had a significant negative relationship with suicidal ideation. The differences in levels of social support in the population depended on religion, employment, and economic status (Yang & Moon, 2012). Kim and Kwon's study (2012) reported that perceived social support and an avoidance coping style had mediating effects on the relationship between the perceived meaning of life and suicidal ideation among South Korean older adults (HJ Kim & Kwon, 2012).

A qualitative study in Korea reported that older adults with serious suicidal ideation could overcome these thoughts when they had support from good friends, neighbors, volunteers, and social workers including caregivers. This care and support helped older adults to escape despair about their present status and regret for their past, and to find the will and hope to continue living. Especially, older adults who had feelings of betrayal and abandonment by family because of neglect were able to overcome their suicidal ideation through their new supportive social networks (Jo & Kim, 2008). A qualitative study of Korean American older adults showed that older Korean immigrants who had had suicidal ideation could confront their situations and strengthen their social skills by turning their focus away from regret and anger about family issues and connecting instead with Korean immigrant networks and caring neighbors. In particular, older adults who suffered from physical difficulties, mental isolation, and severe conflicts with their children and grandchildren were able to regain active lives by receiving

social support and sharing their lives with other Korean immigrant older adults (Jo & Sohn, 2011). In the U.S., similarly, studies have shown that older adults with social support were less likely to have suicidal ideation (June et al., 2009; Rushing et al., 2013).

In summary, many researchers have established that social support works as direct and indirect protective factors against suicidal ideation among community-dwelling older adults. Support from friends and neighbors, numbers of friends and neighbors, and social support in various contexts are crucial protective factors against suicidal ideation for older adults both in South Korea and in the U.S.

Macro Level Protective Factor

As mentioned above, research on protective factors against suicidal ideation has so far focused primarily on individual, psychological, and micro-level social support. However, social, cultural, institutional and country-level characteristics such as cultural beliefs about aging and social welfare policies and services for older populations may have an influence on suicidal ideation among community-dwelling older adults (Barefoot, Beckham, Haney, Siegler, & Lipkus, 1993; Cavalieri, 2013; Hong, Knapp, & McGuire, 2011; H. Lee et al., 2014; Smith, 1992). Of the 69 studies reviewed here, only five (7.2%) investigated macro level protective factors. All of these studies are from South Korea, including one study of Korean American older adults. Findings of this review are shown in Table 1-1.

Support from the Government. Using the Korea National Health and Nutrition Survey, researchers demonstrated that among 1,447 community dwelling older adults, unmet medical needs had an impact on suicidal ideation (H. Lee et al., 2014). Older adults who could not access needed medical services because of institutional and environmental issues were more likely to have suicidal ideation (2.85 times) than older adults who could access needed medical

services. A qualitative study among Korean immigrants in the U.S. reported that pensions and social services for older female adults in the U.S. helped them to live without concerns regarding their cost of living and medical issues. These services also helped them to overcome anger and self-pity regarding the difficulties and regrets of their immigrant lives and to find the will to live again (Jo & Sohn, 2011).

Rural and Urban Areas. Park & Kim reported that older Korean adults living in rural areas were less likely to have suicidal ideation than older adults living in mega-cities or small cities (J.-S. Park & Kim, 2014). Employing the 2011 Elderly Living Condition Survey Database, Lee showed that among 10,003 participants, older adults living in cities had higher suicidal ideation than did older adults living in rural areas (M Lee, 2015). In contrast, Seo & Ko showed that 969 older Korean adults living in big cities were less likely to have suicidal ideation than older adults living in the rural areas (I. Seo & Ko, 2011).

Cultural Attitudes Toward Older Adults in The Society. In the 2011 South Korean Elderly Living Condition Survey database, social- cultural attitudes were analyzed. Among the 10,103 participants aged 61 and older, many reported feelings hurt by offensive and negative words from individuals they did not know. Perceptions that others were shunning them, ignoring their opinions, or pretending not to hear them had significant and direct influence on suicidal ideation (M Lee, 2015). As for macro level protective factors, there was no study in U.S.

In summary, cultural attitudes toward older adults and support from government have worked as protective factors. Geographic location may influence suicidal ideation although the exact nature of this impact is not yet clear.

Discussion

Protective Factors

Applying Bronfenbrenner's Ecological Model (1979), this study has presented four levels of protective factors against suicidal ideation among community-dwelling older adults: individual, family, community, and macro level support. Individuals' internal and external characteristics may protect against suicidal ideation. Such characteristics include spirituality, coping strategies, living arrangements, self-esteem, economic situation and health (Cheavens et al., 2016; J. Choi, 2010; G. Kim & Hwang, 2009; Levy et al., 2014; Marty et al., 2010; C.-S. Oh, 2012; J.-S. Park & Kim, 2014; J. Park et al., 2014). Family structure and the quality of relationships among family members also play a crucial role in protecting community-dwelling older adults against suicidal ideation (Chen et al., 2008; Conwell et al., 2002; Doh & Hoe, 2015; S. Han et al., 2009; H. Lee et al., 2014; H. K. Lee & Chang, 2012 ; O'Dwyer et al., 2013; Y. D. Song et al., 2010). Social support works both directly and indirectly to protect community-dwelling older adults against suicidal ideation. Support from friends and neighbors, the number of friends and neighbors, and micro-level social support in a variety of contexts help to protect older adults against suicidal ideation both in South Korea and in the U.S (J. Y. Bae et al., 2005; Eom, 2007; Jo & Kim, 2008; June et al., 2009; HJ Kim & Kwon, 2012; G.-y. Lee & Cho, 2013; H. K Lee & Kwon, 2015; B Park & Song, 2014; Rushing et al., 2013; I. Seo & Ko, 2011; Yang & Moon, 2012). At the macro level, social attitudes toward older adults and institutional support have been shown to work as protective factors (Jo & Sohn, 2011; M Lee, 2015; J.-S. Park & Kim, 2014; I. Seo & Ko, 2011). As shown by the many studies in this review, individual level protective factors are crucial against suicidal ideation among community dwelling older populations. However, this research has demonstrated that these individual level protective

factors are susceptible to influence from protective factors at the other levels in Bronfenbrenner's ecological model: the presence or absence of family, community and macro level protective factors affects older adult's ability to resist suicidal ideation, either directly or via interaction. Therefore, we need not only to foster individual-level protective factors but also family, community and macro level protective factors to prevent suicidal ideation among older adults in the community. Below this review suggests ways to promote protective factors at these levels through practice, education and research for multi-level protections.

Practice

One importance in practice that seems to be supported by this review is the provision of opportunities for the elderly to engage in social activities. Studies have shown that when the elderly engage with others socially and participate in activities such as leisure sport activities, the engagement works as a protective factor against suicidal ideation (Jeoun, 2013; J. W. Kim & Shin, 2015; M.-I. Kim & Shin, 2013; J. Lee & Lee, 2010; M Lee, 2012; BG Park, 2008; H.-S. Park & Park, 2015; Ra & Cho, 2013; Yi & Lee, 2009). Particularly, older adults living alone, older adults who have weak relationships with family members, and older adults with disabilities may be able to gain confidence, self-efficacy and self-esteem through social participation and thus develop the positive inner strengths that work as protective factors against suicidal thoughts (Jeoun, 2013; H.-S. Park & Park, 2015). Also, older family caregivers with suicidal ideation may be able to relieve their caring burden and stress by participating in social activities (S. A. Choi & Ha, 2012; O'Dwyer et al., 2013). However, many barriers still exist for older adults to participate in social activities because of lack of time, money and accessibility. Therefore, it is also important for practitioners to develop and provide client-oriented services and programs that can enhance participation for older populations.

In addition, this review has reported that older adults can benefit from programs that help them develop proper coping strategies, since effective coping strategies can help them achieve sound relationship with each other as a protection against suicidal ideation. For older adults, problem- and emotion-focused coping and active coping strategies have acted as direct and indirect protective factors against suicidal ideation in risky contexts (Bang, 2014; Chun & Ahn, 2011; Jeong & Kim, 2014; J. Jeong & J. Kim, 2015; Jung & Kim, 2014 ; MY Lee & Nam, 2007; Marty et al., 2010; Y. Song et al., 2013). However, many older adults, especially abused older populations (J. Jeong & J. Kim, 2015), may not know how to ask for help or how to cope properly under various challenging situations. Moreover, knowledge of aging and the ability to combat negative ageist attitudes may also be viewed as effective coping strategies. Welfare agencies, health care organizations and government level affiliates need to offer educational materials containing practical information for proper coping and emergent situations and to coach older populations in sound coping strategies (J. Jeong & J. Kim, 2015). These educational efforts may empower older adults under challenging situations, and thus, help them to overcome suicidal thoughts.

Another valuable practice illuminated by this study is depression-treatment. Studies have reported that depression is a crucial risk factor for suicidal ideation among older adults (Harwood & Jacoby, 2000; Salib & Green, 2003; Waern et al., 2002). Older adults may encounter diverse difficult moments such as losing a spouse or loved ones, financial stress and health problems. These difficulties all are closely associated with depression and suicidal ideation in later life (Eom, 2007; M.-I. Kim & Shin, 2013; Kwak et al., 2013; M Lee, 2012; C.-S. Oh, 2012; Y. E. Oh et al., 2014; J.-S. Park & Kim, 2014; J. Park et al., 2014; Yang & Moon, 2012). Suicidal ideation or depression may have biological, social or structural origins; however, older adults may deal

with these issues successfully by preparing in advance. Lack of knowledge of later life or misunderstanding or stigma about depression and suicidal ideation (Conwell, 2001; G. Kim & Hwang, 2009) may cause disastrous but preventable events. Thus, effective depression treatment is a significant individual protective factor (Conwell, 2001; Vannoy et al., 2007). Not only in Korea but also in the U.S, timely proper and careful depression treatment is needed, tailored to the individual's symptoms and characteristics (Conwell, 2001; Pearson & Brown, 2000; Vannoy et al., 2007). In this context, it is also important to note that drugs such as sedatives and hypnotics that are frequently prescribed as depression treatments are also related to heightened suicidal risk for depressive older populations (Carlsten & Waern, 2009). Careful assessment and monitoring are necessary before and after prescription (Carlsten & Waern, 2009; Kwon et al., 2011).

This review also provides some evidence of the ways that macro-level social supports can protect against suicidal ideation. Social support functions in both Korea and the U.S. serve as a protective factor against suicidal ideation, depression, hopelessness, bereavement, loneliness, and stress among community-dwelling older adults (Chen et al., 2008; Eom, 2007; June et al., 2009; H. S. Kim, 2002; K. T. Kim, Choi, Park, & Ko, 2013; G.-y. Lee & Cho, 2013; H. Lee et al., 2014; H. K Lee & Kwon, 2015; B Park & Song, 2014; Yang & Moon, 2012). Social support services have the greatest impact on vulnerable older adults suffering from high depression or loneliness (Eom, 2007; B Park & Song, 2014). However, the very conditions that make people vulnerable to depression and loneliness often prevent them from accessing services: physical limitations, lack of information or language barriers (Conwell, 2001). To reach these most vulnerable populations, welfare agencies, health care organizations and churches should provide and publicize various kinds of social support such as regular home visits, tele-checks and

community outreach. To meet the needs of the sharply rising aging population in the world (I. Lee, 2011; I. J. Lee, 2009) a denser and more accessible social safety net both at the community and government levels should be prepared.

While there are few studies in this review that explicitly investigate macro-level protective factors against suicidal ideation, a synthesis of the research points to the crucial mediating role played by government-provided social welfare and security programs, especially for elderly populations suffering socio-economic difficulties or social isolation (Hong et al., 2011; Jo & Sohn, 2011; Yur'yev, Värnik, Värnik, Sisask, & Leppik, 2012). Also, Kwon et al (2011) revealed that financial support by the government did play a crucial role against suicidal ideation of older adults who experienced suicidal attempt during their later life (Kwon et al., 2011). In addition, older adults with unmet medical needs have been shown to be more likely to have suicidal ideation in South Korea (H. Lee et al., 2014). These unmet medical needs arise not only due to individuals or family issues but also because of policies or problems in the system of medical care that can only be solved at a macro-level (Cavalieri, 2013). Older adults are especially vulnerable to systemic barriers to accessing medical services ranging from inconvenient reservation processes and long waiting time for treatment to financial barriers caused by limited insurance coverages and transportation issues (Cavalieri, 2013; H. Lee et al., 2014). Client-oriented health care systems and policies (Cavalieri, 2013) for diverse older populations are needed at community and macro levels

Education

Family is a crucial protective factor both in South Korea and in the U.S. Many studies in this review has identified that family level factors such as marital status, marriage quality, family solidarity, relationship with adult children and grandchildren, family resilience, responsibility for

family and children and support from family members work as protective factors against suicidal ideation among older adults living in the community. Good relationship with family members may strengthen older adults to have healthy self-esteem and this is one of the important protective factors against suicidal ideation (J. Y. Bae et al., 2005; Chen et al., 2008; MY Kim, 2010; H. Lee et al., 2014; I. Lee, 2011; Y.-J. Lee, 2013; Lincoln et al., 2012; H. Seo & Jung, 2010; I. Seo & Ko, 2011). Education is needed to promote healthy communication skills and ability to deal with difficulties among family members, including older adults and their spouses, adult children and grandchildren.

This review points to the value of education at a macro-level as well. As Lee found negative cultural attitudes toward older adults in society increased their susceptibility to suicidal ideation (M Lee, 2015). Likewise, at the individual level, helping the elderly resist negative age stereotypes by promoting knowledge about aging has worked significantly as a protective factor against suicidal ideation (G. Kim & Hwang, 2009; Levy et al., 2014). These findings are supported by other studies. Important individual internal protective factors such as self-esteem and self-efficacy in later life (G. Kim & Hwang, 2009; MY Kim, 2010) may be weakened by negative perspectives on aging (Seligman & Elder, 1986). In addition, elderly people who have experienced suicidal ideation during later life may have negative views toward aging (Seligman & Elder, 1986); this may lead older adults to have depression and suicidal ideation. Hostile attitudes toward older adults from other generations had negative psychological and physical impact on older adults (Barefoot et al., 1993; Smith, 1992). The synthesis of these individual and macro-level findings leads to the conclusion that macro-level education interventions may play a valuable role: one effective way to protect against suicide ideation in the long run may be to spread positive attitudes about the elderly and to educate citizens of all ages about the aging

process, with appropriate messages and channels targeted to each generation from every level of schools, senior centers, primary health organizations and media.

In addition, college programs for professionals who work with the elderly -- medical schools, nursing, social work, public health and social services -- should teach rising professionals about successful approaches to aging, deepen their understanding about the “signs and symptoms” (p.40) of depression and suicidal ideation, and familiarize them with optimal treatments for depression in later life (Conwell, 2001). In addition, service providers, particularly frontline workers, including volunteers and gatekeepers from social welfare agencies, public health care providers, relevant social service agencies and religious affiliations should be well prepared with knowledge about aging and elderly suicidal behaviors in advance and receive updated information regularly. Policy and legal regulations are needed to monitor – systematically and regularly -- whether the workers have proper knowledge of aging and strategies to prevent suicidal behaviors at community and government levels.

Future Research

This review of literature highlights a number of inconsistencies and gaps in our understanding of protective factors against suicidal ideation among community-dwelling older adults. Directions for future research are suggested below.

Researchers have revealed spirituality and religiosity as protective factors against suicidal ideation among community-dwelling older adults in various and severely vulnerable contexts (June et al., 2009; BG Park, 2014; Rushing et al., 2013). As the study by Kim et al., mentioned, many studies about religion tend to conflate religion and spirituality (K. T. Kim et al., 2013). Many studies also use as markers of religiousness such attributes as church attendance and statements of having a religion rather than depth of faith in God. Future research needs to

examine not only the status of religion but also the quality of religion and depth of the faith to investigate more accurate protective factors.

This review of the literature also highlights an inconsistency in findings (S. Han et al., 2009) about the impact of age on suicidal ideation (Ahn, 2012; M Lee, 2015; B. G. Park & Chun, 2006; J.-S. Park & Kim, 2014; H. Seo & Jung, 2010; Yang & Moon, 2012). Some findings have suggested that baby boomers and the oldest old elderly may need different kinds of intervention. But it is also possible that the observed differences may be due to recall bias (Han et al., 2009), different measures, or methods of data collection. In addition, researchers have little understanding about the oldest old age group even though their population has been growing rapidly (I. J. Lee, 2009). Both researchers and practitioners may need to differentiate between the younger elderly and the older elderly to offer optimal protection against suicidal ideation in the future.

Support from family, good relationship with a spouse, children, and family members, responsibility for family and living with a spouse or adult children have been shown to be very crucial protective factors for older adults against suicidal ideation in the world (Chen et al., 2008; Doh & Hoe, 2015; S. Han et al., 2009; K. Kim et al., 2011; H. Lee et al., 2014; Lincoln et al., 2012; McLaren, Gomez, Gill, & Chesler, 2015; O'Dwyer et al., 2013; Sohn, 2012). However, there are reports with different results. Family, such as a spouse or children may be the most conflicted relationship (Chen et al., 2008; Y. E. Oh et al., 2014). In the same vein, older women living alone had lower perceived stress in comparison to older women living with others (Y.-J. Kim, 2009). Moreover, older adults living alone with high social support have low suicidal ideation (MY Kim, 2010; MH Kim & Kim, 2011; S. Kim et al., 2011). Another study showed that low-income older adults who were living with their families were more likely to have

suicidal ideation than their counterparts in South Korea (I. Oh, 2009). These conflicting results suggest that we need to investigate not only family structures and living arrangements, but also the quality of relationships with spouse and family members. In the future, researchers should not only investigate status itself, but also focus on the quality of family and social support and networks to assess protective factors accurately.

When it comes to macro level protective factors, cultural attitudes toward older adults in the society and support from government have been shown to work as protective factors, but the role that geographic location may play is not yet clear.

The Comparison Between Korean and the U.S

This research has shown similarities and differences between studies in Korea and in the U.S. One problematic similarity is tendency for researchers to neglect theory in the design of their research models. Most researchers did mention relevant theories in their introduction sections, and some researchers did develop research models based on theoretical frameworks such as the interpersonal theory of suicide (Joiner Jr et al., 2005), Rozanov and Carli's (2012) stress-vulnerability model (Rozanov & Carli, 2012), and Baumeister's (1990) escape theory (Baumeister, 1990). However, many studies--not only from Korea (HS Kim & Heo, 2010) but also from the U.S.-- did not incorporate specific theoretical frames into their research models. To more deeply understand suicidal ideation, in the future researchers should be encouraged to develop research models related to specific theoretical frames to test their hypotheses. This may be helpful for researchers to reach deeper and more scientifically valid consensus about the research topic (HS Kim & Heo, 2010). Another problematic similarity is the paucity, in both countries, of longitudinal and qualitative research on suicidal ideation. Finally, in both countries, it has been shown that protective factors against suicidal ideation work at multiple levels—

within the individual, with the family, and at the community level. This cross-national evidence points to the need for multi-level protective factors, including individual, familial and community protections against suicidal ideation in both countries. For future study, researchers need to conduct longitudinal and qualitative research in order to gain deeper and more accurate understanding of how these levels of protection interact.

On the other hand, there are several differences between the research in South Korea and in the U.S. most strikingly, a difference in the quantity of studies. In this research's limited date ranges from January 2000 to January 2016, over 88% of the studies came from Korea. This high quantity of research may have been motivated by a rise in elderly suicide rates in Korea at the turn of the millennium. The elderly of the 2000s endured the Korean War and rebuilt the country, contributed to and witnessed unprecedented economic development during 1970's, and encountered severe financial crisis in 1997. As this generation grappled with all of these challenges, it seems that they paid less attention to keeping their valuable mental, familial and social safety net. In particular, during the severe financial difficulties in 1997, suicide rates increased rapidly in South Korea. Since topping out around 2010, they have been decreasing slowly (Indicators, 2015; Kwon et al., 2011; Lim, Ha, & Song, 2014) thanks to government, health care and welfare organizations and relevant professions, which have made efforts to reduce suicide rates by providing proper programs, services and research. The large research focus on this topic in South Korea compared with the U.S. is part of this effort.

It is therefore perhaps not surprising that South Korea has generated more research on macro level protective factors such as social atmosphere toward aging and social services and policies for aging than the U.S., which has produced no research on macro level protective factors. In addition, as this review has shown, research in Korea tends to use more specific and a

greater variety of variables than research in the U.S. For example, regarding research for religion as a protective factor, studies in Korea conducted research by investigating religiosity and spirituality separately whereas studies in the U.S investigated religion without distinguishing spirituality. Another striking difference is that there are a few studies investigating a moderator-factors in the U.S (Carlsten & Waern, 2009), but many studies examining various moderators on suicidal ideation in South Korea (Ahn, 2012; J. Y. Bae et al., 2005; B. Han, McKeon, & Gfroerer, 2014; Dong Bae Kim, Yoo, Lee, & Kim, 2014; M.-I. Kim & Shin, 2013; H. K Lee & Kwon, 2015; I. Lee, 2011; BG Park, 2008; BG Park, 2014; B Park & Song, 2014; M. J. Park, 2009; S. Park & Hur, 2013; Yi & Lee, 2009). One positive quality of U.S. research is that most standardized measures of suicidal ideation in older adults have been developed in the U.S. More older adults-centered measurement research needs to be developed for the Korean context.

There are also some interesting differences between U.S. and Korean research findings that seem to arise from cultural differences between the two countries. For example, the Song et al. (2010) study showed that older adults living alone who had children or grandchildren tended to have more suicidal ideation than did older adults living alone who had no child or grandchild (Y. D. Song et al., 2010). This result may reflect a culture tendency in South Korea. Although nuclear families and single households have been gradually prevailing in South Korea, living with adult children in later life may be still preferable among community-dwelling older adults in South Korea, compared with those in the U.S. Many studies have examined living arrangement such as living alone, living with a spouse, children, grandchildren and other family members regarding suicidal ideation among community-dwelling older adults in South Korea (S.-S. Han et al., 2012; Y.-J. Kim, 2009; Y. E. Oh et al., 2014; Sohn, 2012; Y. D. Song et al., 2010). They may highlight culture contexts which are unlike the couple-centered lifestyle in Western countries (I.

Lee, 2011). Cultural attitudes may also be reflected in the kinds of research questions that get asked. For example, research about elderly people living alone or low-income elderly is not rare in South Korea; however, there is no study in Korea comparable to the research in the U.S. which examines retired veteran status as a protective factor against suicidal ideation. Such differences may reflect each society's particular interests and cultural issues. Along the same line, research about race and ethnic groups exists in U.S, but there is no such study in Korea. This is because the history of diversity is much shorter in Korea than in the U.S. Although ethnic diversity has been growing in South Korea, it is most prevalent in younger generations.

Conclusion

This systematic literature review synthesizes findings about protective factors against suicidal ideation among community-dwelling older adults by comparing research from South Korea and the U.S. As the many studies in this review show, individual level protective factors are crucial against suicidal ideation among community dwelling older populations. Individuals' inner strength may deter inclination of suicidal ideation. However, this research has revealed that these individual level protective factors may be easily influenced by family, community and macro-level protective factors via long-lasting and complex interaction processes (Eom, 2007; HS Kim & Heo, 2010; MoScicki, 1995). To reduce and prevent suicidal ideation in later life, assessment and intervention using ecological perspectives (H. Lee et al., 2014), are needed as well as research that takes into account cultural and social forces (Eom, 2007).

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Appendices

Table 1-1.
Protective Factors Against Suicidal Ideation Among Community Dwelling Older Adults

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Individual	Social Activity								
	Leisure Sports Participation: buffer effect	2009	Yi, Eun Surk Lee, Sun Jang	survey	224 participants ages 65 and over	South Korea	Scale for Suicidal Ideation(SSI) by Beck, Kovacs and Weissman (1979) translated and adapted by Shin et al (1990) Measurement by Seo(2005) from ASRE(assessing the suicidal risk of an elder)+(scale for suicidal ideation : SSI)by Beck et al + Suicidal Probability Scale by Cull and Gill(1988)	Multiple regression	-
	participation in leisure sports	2010	Lee, Jong Kyeung Lee, Eun Joo	survey	220 participants ages 65 and over	South Korea	Scale for Suicidal Ideation(SSI) by Beck, Kovacs and Weissman (1979) translated and adapted by Shin et al (1990) Measurement by Seo(2005) from ASRE(assessing the suicidal risk of an elder)+(scale for suicidal ideation : SSI)by Beck et al + Suicidal Probability Scale by Cull and Gill(1988)	ANCOVA, Regression, Path Analysis	-
	social activity -mediating effect	2012	Lee, Myo Sook	survey	830 participants ages 65 and over	South Korea	Suicidal Ideation Scale by Harlow et al.(1986) translated by Kim(2002)	Anova, SEM	Activity Theory, exchange theory

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Individual	support from friends - buffer effects	2005	Bae, Ji Yeon Kim, Won Hyung Yoon, Kyeong A	survey	265 participants ages 60 and over	South Korea	Based on Beck's(Beck Scale for Suicide Ideation, SSI) translated by Shin et al(1990)	multiple regression	-
	regular physical activity, smoking status, drinking status, leisure, self-esteem, social support	2013	Ra, Chaelin Karen Cho, Youngtae	the 2010 Seoul Welfare Panel Study	1,415 people 65 and over	South Korea	Have you considered committing suicide in the past 12 months?	explanatory factor analysis, multiple logistic regression	-
	Spiritual/Religiosity								
	Spirituality- moderating effect	2013	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Ko, Su Hee	survey	836 participants ages 65 and over	South Korea	Suicide Ideation Scale: SIS by Harlow, Newcomb and Bentler(1986) translated and adapted by Kim(2002)	hierarchical multiple regression	-
	Spirituality- moderating effect	2014	Park, Bong gil	survey	603 participants ages 65 and over living alone	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	SEM, Multi group analysis	-
- compensatory and buffering effects	2002	Lee, Sungho	survey	elderly participants ages 65 and over	Korea	2002	regression	-	

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	Subjective religiosity-moderating effect	2013	Park, Sun Ae Hur, Jun Soo	survey	319 participants ages 60 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS) translated by Kim(2002) and then utilized by Seo&Ko(2011)	Hierarchical Multiple Regression, GLM : general linear model	-
	the immigrant life, facing reality through comparison between the life in America and in South Korea, survival skills and constructing view of life, informal and formal social support including religion	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-depth interview	5 South Korea American participants ages 65 and over	US	-	A phenomenological research method by Giorgi (2005)	-
	Support by informal and formal relationship	2008	Jo, Kae-Hwa Kim, Yeong-Kyeong	in-depth interview	5 participants ages 65 and over	South Korea	-	A phenomenological research method by Giorgi (2004)	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	greater church attendance, perceived social support-mediating effect between public religious activity and suicidal ideation	2013	Rushing, N.C.a , Corsentino, E.a, Hames, J.L.a, Sachs-Ericsson, N.a, Steffens, D.C	survey	Participants were 248 ages 59 years and older	US	the suicidal thoughts item from the Montgomery–Asberg Depression Rating Scale(MADRS; Montgomery & Asberg, 1979)	hierarchical linear regression analysis	network theory
	religiosity ethnicity - moderating effect	2009	June, Andrea; Segal, Daniel L.; Coolidge, Frederick L.;	survey	37European an American older adults ages from 60 to 85 years old, 35 African American older adults ages from 62 to 86 years	US	_RFL reasons for living(Linehan et al, 1983)	ANOVA, sequential regression analysis	–

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	Gender & Living Arrangement	2012	Han, Sam-Sung Kang,Sung-Wook Jeong,Seong-Hwa	South Korean National Health and Nutrition Examination Survey (the 4th Wave)	2,304 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?"	logistic regression	
	elderly living with spouse or children elderly living alone with healthy psychological factors	2011	Kim, Ki Tae Choi, Song Sik Park,Mi Jin Park, Seon Hee Ko, Su Hee Park,Hyun Suk	survey	908 participants ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow·Newcomb·Bentler, 1986) translated by Kim(2002) Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated and adapted by Shin et al (1990)	multiple regression	-
	participating in social activities	2010	Song, Young-dal . Son, Ji-a . Park, Soon-mi	survey	222 people 65 and over living alone	South Korea	" Have you ever seriously thoughts about suicide during the past 1 year?"	multiple logistic regression	Eco-system approach by Kemp(1998)
	Gender & Living Arrangement	2009	Kim, Young Ju	National Health and Nutrition Survey in 2005	participants ages 65 and over	South Korea	" Have you ever seriously thoughts about suicide during the past 1 year?"	multiple logistic regression	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Individual	Coping Strategies								
	coping strategies of stress as mediator	2007	Lee,Mi Yea Nam,Ki Min	survey	285 participants ages 60 and over	South Korea	Amended measurement from ASRE(Assessing the Suicidal Risk of an Elder) and Beck et al(1979) and Cull and Gill(1988) Suicidal Ideation (SSI) developed by Beck, Kovacs and Weissman(1979) translated and adapted by Sin et al(1990) and then used by Kim(2007)	Structural Equation Modeling	stress theory
	stress coping style: mediator	2013	Song,Young Ji Son, Ji Hyeon Nam, Hee Un	survey	476 participants ages 65 and over	South Korea	Suicidal Ideation (SSI) developed by Beck, Kovacs and Weissman (1979) translated and used by Prak and Shin (1990)	hierarchic al multiple regression	-
	active coping - moderating effects	2011	Chun, Mi Ae Ahn, Joon Hee	survey	247 participants ages 60 and over	South Korea	Suicide Ideation Scale: SIS by Harlow, Newconb and Bentler(1986) translated by Cho(1990)	hierarchic al multiple regression	coping theory
	the active integrated character type	2014	Bang,So Youn	survey	149 participants ages 65 and over	South Korea		one-way ANOVA, Pearson`s correlation coefficient	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	active coping coping behavior- moderating effect	2014	Jeong,Hae Ran Kim, Mi Won Jeong, Hae-Ran Kim,Mi-Won	survey	344 participants ages 65 and over	South Korea	Suicidal Ideation Scale developed by Harlow, Newcomb and Bentler, (1986) translated by Kim(2002) and then utilized by Park(2005)	multiple regression	-
	active coping	2015	Jeong, Jeong Hee Kim, Jung Soon	2011 South Korean National Survey on the Elderly	10,537 participants ages 65 or older	South Korea	Have you considered committing suicide after at the age of 60years old?	x2-test and logistic stepwise regression	-
	level of knowledge on aging - mediating effect	2009	Kim,Geun Young Hwang, Mi Gu	survey	585 participants ages 65 and over	South Korea	SIS(Harlow, Newcomb, & Bentler, 1986) translated and adapted by Kim(2002) for the South Korean elderly.	Structural Equation Modeling: SEM	-
	positive age stereotypes	2014	Levy, B.R.a , Pilver, C.E.b, Pietrzak, R.H.c	the National Health and Resilience in Veterans Study	2,031 Veterans Participants ages 55 and over	US	two questions from the Patient Health Questionnaire-9 (Kroenke et al., 2009)	multivariate- logistic- regression models multivariate-linear regression models	stress- vulnerability model (Rozanov and Carli, 2012)

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Individual	Problem- and emotion-focused coping	2010	Meghan A. Marty, Daniel L. Segal and Frederick L. Coolidge	survey	108 older adults ages 65 to 95 years	US	Geriatric suicide ideation scale(GSIS)	multiple regression	-
	Self - Esteem								
	self- esteem, comfortable communication with family	2006	Park, Bong Gil Chun,Suk Kyoun	survey	145 participants ages 65 and over	Seoul In South Korea, Toronto in Canada	Yale evaluation of Elderly Suicidality Scale of Latham and Prigerson(2004)	SEM	-
	self-esteem Health Economic status	2007	Kim, Hyun Soon Kim,Byeong Seok	survey	183 participants ages 65 and over	South Korea	Halow, Newcomb and Bentler's Suicide Ideation Scale (1986) SIS(Harlow, Newcomb, & Bentler, 1986) translated and adapted by Kim(2002) for the South Korean elderly.	a path analysis	-
	level of knowledge on aging - mediating effect	2009	Kim, Geun Young Hwang, Mi Gu	survey	585 participants ages 65 and over	South Korea	Kim(2002) for the South Korean elderly.	Structural Equation Modeling: SEM	-
Individual	the level of self-esteem, life events, and family communication-moderating effects Self-esteem was the most powerful variable. Health	2008	Park,Bong gil	survey	273 participants ages 65 and over	South Korea	Yale evaluation of Elderly Suicidality Scale of Latham and Prigerson(2004)	Multiple regression , GLM: general linear model	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	physical health - moderating effect	2007	Kim, Su Hyun Choi, Yeon Hee	survey	302 participants ages 60 and over	South Korea	Scale for Suicidal Ideation (SSI) by Beck, Kovacs and Weissman (1979) translated and adapted by Shin et al (1990) for the Korean elderly	hierarchical multiple linear regression	-
	elderly living with spouse or children elderly living alone with healthy psychological and physical factors	2011	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Park, Seon Hee Ko, Su Hee Park, Hyun Suk	survey	908 participants ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow-Newcomb-Bentler, 1986) translated by Kim(2002)	multiple regression	-
	social activity -mediating effect	2012	Lee, Myo Sook	survey	830 participants ages 65 and over	South Korea	Suicidal Ideation Scale by Harlow et al.(1986) translated by Kim(2002)	Anova, SEM	Activity Theory, exchange theory
	Subjective Health Perceptions and Quality of Life	2012	Oh, Chang-Seok	the South Korea National Health and Nutrition Examination Survey of 2010	1,478 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?"	Logistic Regression	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	perceived good health, religion	2013	Kwak, Yun-Bock Ko, Sung-Hee Kim, Hyun-Kyung	Survey	245 participants ages 65 and over	South Korea	Scale for Suicidal Ideation (SSI) by Beck, Kovacs and Weissman (1979) translated and adapted by Shin et al (1990) for the Korean elderly	Multiple regression	-
	participants with health insurance, high self-perceived health and sleep satisfaction	2014	Park, Keum Sook Kim, Young Hee Lee, Kyoung Wan Lyu, Yeoung Su Jeong, Heon Young	survey	165 participants ages 65 and over	South Korea	Harlow, Newcomb and Bentler (1986)'s (Suicide Ideation Scale: SIS) translated and adapted by Kim (2002)	multiple regression	-
	social support and person's sense of mastery	2007	Eom, Tae-Wan	survey	297 participants ages 65 and over	South Korea	(Suicide Ideation Scale) by Harlow et al. (1986) translated by Kim (2002)	multiple regression analysis	-
	social support - moderating effect								
	perceived health status, social support, life satisfaction	2012	Yang, Nam-Young Moon, Sun-young	survey	123 participants ages 65 and over	South Korea	Beck, Kovacs and Weissman (1979)'s SSI (Scale for Suicidal Ideation) translated by Cho (2008)	multiple regression	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Individual	Economic Situation								
	elderly living with spouse or children	2011	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Park, Seon Hee Ko, Su Hee Park, Hyun Suk	survey	908 participants ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow·Newcomb· Bentler, 1986) translated by Kim(2002) Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated by Cho(2008)	multiple regression	-
	elderly living alone with healthy psychological and pshysical factors, perceived economic status.								
	perceived health status, social support, life satisfaction	2012	Yang, Nam-Young Moon, Sun-Young	survey	123 partici pants ages 65 and over	South Korea		multiple regression	-
-	supportive network, : family, adult married children, economic welfare, subjective health	2014	Oh, Young Eun Lee, Jeong Hwa Shin, Hyo Yeon	survey	522 participan ts ages 60 and over elderly single and couple household s	South Korea	SIQ : Suicidal Ideation Questionnaire) by Raynolds(1987) and (GSIS: Geriatric Suicide Ideation Scale) by Hesel and Flett(2006)	multiple regression	social network by Antonucci(19 86)

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	resilience	2014	Park, Jong Suk Park, Yong Kyung Jeong, Seong Hwa Lee, Chae Shik Kim, Hong	survey	335 participants ages from 65 to 85	South Korea	SSI: Beck, Kovacs and Weissman, 1979	multiple regression	resilience theory
	meaning of life	2012	Kim, Hyun Ji Kwon, Jung Hye	survey	240 elderly ages 60 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	structural equation modeling	-
	Computer and internet literacy and cellular phone possession	2013	Lee, Yoon-jung	2011 national survey of the elderly life conditions	6,774 participants ages 60 and above	South Korea	Have you considered committing suicide	multiple regression and logit analysis	-
	facing reality, survival skills, constructing view of life, informal and formal social support including religion, enjoyign hobby	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-depth interview	5 South Korea American participants ages 65 and over	US	-	A phenomenological research method by Giorgi (2005)	-
	resilience	2010	Choi, Jung Min	survey	208 participants ages 60 and over	South Korea	SSI: Beck, Kovacs and Weissman, 1979	multiple regression	resilience theory
	seperative house -holds, age		Choi, Mankyu	Nutrition Survey	participants ages 65 and over		about suicide during the past 1 year?	-	Kemp(1998)

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Family level	Support from Family								
	the preparation for old age including economic and psychological welfare and family solidarity	2014	Jung, Myung-Hee Kim, Eun-Jeong	survey	468 participants ages 65 years and over	South Korea	SIS (Suicide Ideation Scale, Harlow-Newcomb-Bentler, 1986) translated by Kim(2002)	multiple regression	-
	self efficacy, meeting frequency of friends and adult children	2010	Kim, Meer Ryoung	survey	264 participants ages 60 and over	South Korea	Osman et al(1998)'s PANSI	multiple regression	
-	supportive network,; family, adult married children, economic welfare, subjective health	2014	Oh, Young Eun Lee, Jeong Hwa Shin, Hyo Yeon	survey	522 participants ages 60 and over elderly single and couple households	South Korea	SIQ : Suicidal Ideation Questionnaire) by Reynolds(1987) and (GSIS: Geriatric Suicide Ideation Scale) by Hesel and Flett(2006)	multiple regression	social network by Antonucci(1986)
	familism, living in a rural area	2014	Park, Joon-Shik, Kim Young Bum	the successful aging for the South Korean people	1,000 participants ages 20 and above	South Korea	Yes or No	binary logit Analysis, , Multiple regression analysis	Socio Emotional Selective Theory

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	family support and self-esteem	2010	Seo, Hee Suk Jung, In Sook	survey	182 participants ages 60 and over	South Korea	(Beck Scale for Suicide Ideation [Beck, Kavacs, & Weissman, 1979]) translated by Shin, M. S. (1992)	t-test, ANOVA, Scheffe's test, Dunnett T3 and Pearson Correlation Coefficients	-
	family / friend support	2011	Lee, InJeong	survey	359 participants ages 65 and over	South Korea	(Beck Scale for Suicide Ideation [Beck, Kavacs, & Weissman, 1979] translated and adapted by author for the Korean elderly)	multiple regression	stress-diathesis model
	help from others and participating in social activities	2010	Kim, Dong Bae Park, Seo Young	survey	800 participants ages 60 and over	South Korea	Suicide Ideation Scale, Harlow·Newcomb·Bentler, 1986	multiple regression, sobel test for Mediating Effects	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	familial help and support, caring for own child	2012	Choi, Sin-Ae Ha, Kyu-Soo	survey	274 participants ages 55 and over caring for a chronic invalid adults	South Korea	Based on Beck, Kavacs, Weissman[1979] translated and adapted by Choi(2008).	hierarchical regression analysis	ecological theory
	having many friends and neighbors	2008	Jo, Kae-Hwa, Kim, Yeong-Kyeong	survey	219 participants ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	-
	support from friends - buffer effects	2005	Bae, Ji Yeon Kim, Won Hyung Yoon, Kyeong A	survey	265 participants ages 60 and over	South Korea	Based on Beck's(Beck Scale for Suicide Ideation, SSI) translated by Shin et al(1990) Scale for Suicide Ideation(SSI : Beck	multiple regression	-
	family resilience, especially, the family resources and communication.	2013	Lee, Young Kyung Jung, Myung Hee	survey	188 participants ages 65 and over	South Korea	k, Kovas & Weissman, 1979) translated and adapted by Park and Shin(1990)	Multiple regression analysis	family resilience theory

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	living with spouse, relationship satisfaction with family, and adult children.	2015	Doh, Moonhak Hoe, Maanse	South Korea Welfare Panel Study 6th wave, 2011	3,089 participants ages 65 and over	South Korea	Yes or No	logistic regression, ROC Curve Analysis	Ecological System Theory
	good subjective health status, living spouse and having children who live in seperative house -holds	2014	Lee, Hyunkyung Kim, Mi Sun Choi, Seungsun Choi, Mankyu	2011 National Health and Nutrition Survey	1,447 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?	logistic regression	Eco-system approach by Kemp(1998)
	elderly living with family	2012	Sohn, Jung Nam	survey	378 participants ages 65 and over : [190 older adults living alone and 188 older adults living with sb]	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated and adapted by Shin et al(1990)	t-test, ANOVA(D uncur test), Pearson's r,	-
	elderly living with spouse	2009	Han, Samsung Kang, Sungwook Yoo, Wangkeun Phee, Young Gyu	the South Korea National Health and Nutrition Examination Survey in 1998, 2001, and 2005	1,097 people 65 and over in 2005 978 people 65 and over in 2001 1,044 people 65 and over in 1998	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?	multiple logistic regression	Psychological theory (Osgood, et al., 1986).and sociological theory(Durkheim, 1951).

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Family level	elderly living with spouse or children elderly living alone with healthy psychological and pshysical factors, perceived economic status.	2011	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Park, Seon Hee Ko, Su Hee Park,Hyun Suk	survey	908 participan ts ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow·Newcomb· Bentler, 1986) translated by Kim(2002)	multiple regression	–
	marital intimacy: moderating effect	2013	Park, Hye Ok Yook,Sung Pil	survey	447 participan ts ages 60 and over	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation)	Path Analysis	–
	Responsibility for Family and Children								
	familial help and support, caring for own child	2012	Choi,Sin-Ae Ha,Kyu-Soo	survey	274 participan ts ages 55 and over caring for a chronic invalid adults	South Korea	Based on Beck, Kavacs, Weissman[1979] translated and adapted by Choi(2008).	hierarchia l regression analysis	ecological theory
	having many friends and neighbors , Responsibility for family	2008	Jo, Kae-Hwa, Kim, Yeong- Kyeong	survey	219 participan ts ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	–

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Community Level	facing reality survival skills constructing view of life, informal and formal social support including religion, enjoyign hobby, responsibility for family	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-depth interview	5 South Korea American participan ts ages 65 and over	US	-	A phenomen ological research method by Giorgi (2005)	-
	social activities - moderating effects	2015	Kim, Jung Woo Shin, Yong Seok	survey	796 participan ts living alone	South Korea	Beck et al.(1979)'s Scale for a Suicide Ideation: SSI translated and adapted by Shin et al(1990)	structural equation modeling and multi- group analysis	the escape theory by Baumeister(1 990)
	social support - moderating effects	2014	Park, Bonggil, Song, Inseok	survey	572 people 65 years of age and older living alone	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	structural equation modeling	Suicide Theory by Baumeister(1 990)
	participating in social activities	2010	Song, Young- dal . Son, Ji-a . Park, Soon-mi	survey	222 people 65 and over living alone	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated and adapted by Shin et al (1990)	multiple regression	Eco-system approach by Kemp(1998)

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	support from friends - buffer effects	2005	Bae, Ji Yeon Kim, Won Hyung Yoon, Kyeong A	survey	265 participants ages 60 and over	South Korea	Based on Beck's(Beck Scale for Suicide Ideation, SSI) translated by Shin et al(1990)	multiple regression	-
-	support from friends	2011	Seo, In Kyun Ko, Min Seok	survey	969 participants ages 65 and over	South Korea	(Suicide Ideation Scale) by Harlow et al.(1986) translated by Kim(2002)	hierarchical regression	social support theory
	having many friends and neighbors	2008	Jo, Kae-Hwa, Kim, Yeong-Kyeong	survey	219 participants ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	-
	social support and person's sense of mastery	2007	Eom, Tae-Wan	survey	297 participants ages 65 and over	South Korea	(Suicide Ideation Scale)	multiple regression analysis	-
	social support - moderating effect						by Harlow et al.(1986) translated by Kim(2002)		
	social support - mediating effects	2013	Lee, Geum-yong Cho, Eunhye	survey	399 participants ages 65 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS) after translated and adapted by Kim(2002)	structural equation modeling	

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	social support - moderating effects	2015	Lee, Hye Kyung Kwon, Ju Hyun	survey	303 participants ages 65 and over	South Korea	Beck, Kovacs and Weissman(1979)'S SI (Scale for Suicidal Ideation) translated and adapted by Shin et al (1990)	multiple regression	-
	perceived health status, social support, life satisfaction	2012	Yang, Nam-Young Moon, Sun-young	survey	123 participants ages 65 and over	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated by Cho(2008)	multiple regression	-
	high meaning of life and perceived social support perceived social support - mediating effects	2012	Kim, Hyun Ji Kwon, Jung Hye	survey	240 elderly ages 60 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	structural equation modeling	-
	having many friend and neighbors	2008	Jo, Kae-Hwa, Kim, Yeong-Kyeong	survey	219 participants ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	-
	facing reality, survival skills and constructing view of life, informal and formal social support including religion, enjoyign hobby	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	-	A phenomenological research method by Giorgi (2005)	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	social support and self-efficacy - mediating effects	2013	Jeong, Il-Young	secondary data 2010 Seoul Welfare Panel	1,429 participants ages 65 and over	South Korea	Sucidal Ideation: SSI by Beck et al.(1979) adapted	Structural Equation Modeling, and sobel test	-
	subjective social support	2006	Rowe, J.L.abc , Conwell, Y.b, Schulberg, H.C.a, Bruce, M.L.	survey	522 older adults ages 65 and over	us	SCID(Structured Clinical Interview for DSM-IV I Disorders), HRSD(Hamilton Rating Scale for Depression)	multivariate logistic regression	-
	religiosness ethnicity - moderating effect	2009	June, Andrea; Segal, Daniel L.; Coolidge, Frederick L.;	survey	37European American older adults ages from 60 to 85 years old, 35 African American older adults ages from 62 to 86 years	US	_RFL reasons for living(Linehan et al, 1983)	ANOVA, sequential regression analysis	-

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
Macro Level	greater church attendance, perceived social support-mediating effect between public religious activity and suicidal ideation	2013	Rushing, N.C.a , Corsentino, E.a, Hames, J.L.a, Sachs-Ericsson, N.a, Steffens, D.C	survey	Participants were 248 ages 59 years and older	US	the suicidal thoughts item from the Montgomery–Asberg Depression Rating Scale(MADRS; Montgomery & Asberg, 1979)	hierarchical linear regression analysis	network theory
	support from Government	2014	Lee, Hyunkyung Kim, Mi Sun Choi, Seungsun Choi, Mankyu	2011 National Health and Nutrition Survey	1,447 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?"	logistic regression	Eco-system approach by Kemp(1998)
	support from Government	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-depth interview	5 South Korea American participants ages 65 and over	US	–	A phenomenological research method by Giorgi (2005)	–
	Living Area	2014	Park, Joon-Shik, Kim Young Bum	the successful aging for the South Korean people	368 participants ages 65 and over among 1,000 participants ages 20 and above	South Korea	Yes or No	binary logit Analysis, , Multiple regression analysis	Socio Emotional Selective Theory

Table 1-1. Continued

Level	Protective Factor	Year	Author	data source	Participants	Area	Measurement for DV	Analysis methods	Theory
	Attitude toward Older Adults in the Society	2015	Lee,Mee-Ae	2011 Elderly Living Condition Survey database	10,103 Participants ages 61 and over	South Korea	Yes or No regarding "Have you ever considered suicide after age 61 years?"	logistic regression	Social Quality Theory

Table 1-2.
Protective Factors Against Suicidal Ideation Among Community Dwelling Older Adults in South Korea

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Individual	Social Activity								
	Leisure Sports Participation: buffer effect	2009	Yi, Eun Surk Lee, Sun Jang	survey	224 participants ages 65 and over	South Korea	Scale for Suicidal Ideation (SSI) by Beck, Kovacs and Weissman (1979) translated and adapted by Shin et al (1990) Measurement by Seo (2005) from ASRE (assessing the suicidal risk of an elder) + (scale for suicidal ideation: SSI) by Beck et al + Suicidal Probability Scale by Cull and Gill (1988)	Multiple regression	-
	participation in leisure sports	2010	Lee, Jong Kyeung Lee, Eun Joo	survey	220 participants ages 65 and over	South Korea	Suicidal Ideation Scale by Harlow et al. (1986) translated by Kim (2002)	ANCOVA, Regression, Path Analysis	-
	social activity -mediating effect	2012	Lee, Myo Sook	survey	830 participants ages 65 and over	South Korea	Suicidal Ideation Scale by Beck et al. (1979) translated and adapted	Anova, SEM	Activity Theory, exchange theory
	social participation and preparation for aging - moderating effects	2013	Kim, Myoung-II Shin, Hye-Ri	secondary data 2010 Seoul Welfare Panel	1,429 participants ages 65 and over	South Korea	Suicidal Ideation: SSI by Beck et al. (1979) translated and adapted	multiple regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	social activities - moderating effects	2015	Kim, Jung Woo Shin, Yong Seok	survey	796 participants living alone	South Korea	Beck et al.(1979)'s Scale for a Suicide Ideation: SSI translated and adapted by Shin et al(1990)	structural equation modeling and multi-group analysis	the escape theory by Baumeister(1990)
	disability acceptance and social participation - mediating effects	2015	Park, Hyun Sook Park, Yong Soon	survey	318 participants with disabilities ages 55 and over	South Korea	Beck et al.(1979)'s Scale for a Suicide Ideation: SSI translated and adapted by Shin et al(1990)	Hierarchical Regression Analysis, Sobel test	-
	Self-efficacy and social participation - compensatory and buffering effects	2009	Park, Mi Jin	survey	295 participants ages 65 and over	South Korea	scocco and leo 2002	multiple regression	-
	support from friends - buffer effects	2005	Bae, Ji Yeon Kim, Won Hyung Yoon, Kyeong A	survey	265 participants ages 60 and over	South Korea	Based on Beck's(Beck Scale for Suicide Ideation, SSI) translated by Shin et al(1990)	multiple regression	-
	regular physical activity, smoking status, drinking status, leisure, self-esteem, social support	2013	Ra, Chaelin Karen Cho, Youngtae	the 2010 Seoul Welfare Panel Study	1,415 people 65 and over	South Korea	Have you considered committing suicide in the past 12 months?	explanatory factor analysis, multiple logistic regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory	
Individual	Spiritual/Religiosity						Suicide Ideation Scale: SIS by Harlow, Newcomb and Bentler(1986) translated and adapted by Kim(2002)			
		Spirituality-moderating effect	2013	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Ko, Su Hee	survey	836 participants ages 65 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	hierarchical multiple regression	–
		Spirituality-moderating effect	2014	Park, Bong gil	survey	603 participants ages 65 and over living alone elderly	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	SEM, Multi group analysis	–
	Subjective religiosity-moderating effect	2013	Park, Sun Ae Hur, Jun Soo	survey	319 participants ages 60 and over	South Korea	Bentler(1986)'s (Suicide Ideation Scale: SIS) translated by Kim(2002) and then utilized by Seo&Ko(2011)	Hierarchical Multiple Regression, GLM : general linear model	–	

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	the immigrant life, facing reality through comparison between the life in America and in South Korea, survival skills and constructing view of life, informal and formal social support including religion	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	–	A phenomenological research method by Giorgi (2005)	–
	Support by informal and formal relationship	2008	Jo, Kae-Hwa Kim, Yeong-Kyeong	in-deapth interview	5 participants ages 65 and over	South Korea	–	A phenomenological research method by Giorgi (2004)	–
Individual	Living arrangement								

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	elderly living with family	2012	Sohn, Jung Nam	survey	378 participants ages 65 and over : [190 older adults living alone and 188 older adults living with sb]	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated and adapted by Shin et al(1990)	t-test, ANOVA(Duncan test), Pearson's r,	-
-	supportive network,: family, adult married children, economic welfare, subjective health	2014	Oh, Young Eun Lee, Jeong Hwa Shin, Hyo Yeon	survey	522 participants ages 60 and over elderly single and couple households	South Korea	SIQ : Suicidal Ideation Questionnaire) by Reynolds(1987) and (GSIS: Geriatric Suicide Ideation Scale) by Hesel and Flett(2006)	multiple regression	social network by Antonucci(1986)
	Gender & Living Arrangement	2009	Kim, Young Ju	secondary data South Korea National Health and Nutrition Survey in 2005	4,051 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?	multiple logistic regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	Gender & Living Arrangement	2012	Han, Sam-Sung Kang,Sung-Wook Jeong,Seong-Hwa	South Korean National Health and Nutrition Examination Survery (the 4th Wave)	2,304 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?	logistic regression	
	elderly living with spouse or children elderly living alone with healthy psychological factors	2011	Kim, Ki Tae Choi, Song Sik Park,Mi Jin Park, Seon Hee Ko, Su Hee Park,Hyun Suk	survey	908 participants ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow·Newcomb·Bentler, 1986) translated by Kim(2002)	multiple regression	-
	participating in social activities	2010	Song, Young-dal . Son, Ji-a. Park, Soon-mi	survey	222 people 65 and over living alone	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated and adapted by Shin et al (1990)	multiple regression	Eco-system approach by Kemp(1998)

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Individual	Coping Strategies								
	coping strategies of stress as mediator	2007	Lee, Mi Yea Nam, Ki Min	survey	285 participants ages 60 and over	South Korea	Amended measurement from ASRE (Assessing the Suicidal Risk of an Elder) and Beck et al (1979) and Cull and Gill (1988) Suicidal Ideation (SSI) developed by Beck, Kovacs and Weissman (1979) translated and adapted by Sin et al (1990) and then used by Kim (2007)	Structural Equation Modeling	stress theory
	stress coping style: mediator	2013	Song, Young Ji Son, Ji Hyeon Nam, Hee Un	survey	476 participants ages 65 and over	South Korea	Suicidal Ideation (SSI) developed by Beck, Kovacs and Weissman (1979) translated and used by Prak and Shin (1990)	hierarchical multiple regression	-
	active coping - moderating effects	2011	Chun, Mi Ae Ahn, Joon Hee	survey	247 participants ages 60 and over	South Korea		hierarchical multiple regression	coping theory

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	the active integrated character type	2014	Bang, So Youn	survey	149 participants ages 65 and over	South Korea	Suicide Ideation Scale: SIS by Harlow, Newcomb and Bentler(1986) translated by Cho(1990)	one-way ANOVA, Pearson's correlation coefficient	-
	active coping coping behavior-moderating effect	2014	Jeong, Hae Ran Kim, Mi Won Jeong, Hae-Ran Kim, Mi-Won	survey	344 participants ages 65 and over	South Korea	Suicidal Ideation Scale developed by Harlow, Newcomb and Bentler, (1986) translated by Kim(2002) and then utilized by Park(2005)	multiple regression	-
	active coping	2015	Jeong, Jeong Hee Kim, Jung Soon	2011 South Korean National Survey on the Elderly	10,537 participants ages 65 or older (11.2%)	South Korea	Have you considered committing suicide after at the age of 60years old?	x2-test and logistic stepwise regression	-
	level of knowledge on aging - mediating effect	2009	Kim, Geun Young Hwang, Mi Gu	survey	585 participants ages 65 and over	South Korea	SIS(Harlow, Newcomb, & Bentler, 1986) translated and adapted by Kim(2002) for the South Korean elderly.	Structural Equation Modeling: SEM	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Individual	Self – Esteem								
	self- esteem, comfortable communication with family	2006	Park, Bong Gil Chun,Suk Kyouon	survey	145 participants ages 65 and over	Seoul In South Korea, Toronto in Canada	Yale evaluation of Elderly Suicidality Scale of Latham and Prigerson(2004)	SEM	–
	self-esteem Health Economic status	2007	Kim, Hyun Soon Kim,Byeong Seok	survey	183 participants ages 65 and over	South Korea	Halow, Newcomb and Bentler's Suicide Ideation Scale (1986)	a path analysis	–
	level of knowledge on aging - mediating effect	2009	Kim, Geun Young Hwang, Mi Gu	survey	585 participants ages 65 and over	South Korea	SIS(Harlow, Newcomb, & Bentler, 1986) translated and adapted by Kim(2002) for the South Korean elderly.	Structural Equation Modeling: SEM	–

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Individual	the level of self-esteem, life events, and family communication-moderating effects	2008	Park,Bong gil	survey	273 participants ages 65 and over	South Korea	Yale evaluation of Elderly Suicidality Scale of Latham and Prigerson(2004)	Multiple regression, GLM: general linear model	-
	Self-esteem was the most powerful variable.								
	Health								
	physical health - moderating effect	2007	Kim, Su Hyun Choi, Yeon Hee	survey	302 participants ages 60 and over	South Korea	Scale for Suicidal Ideation(SSI) by Beck, Kovacs and Weissman (1979) translated and adapted by by Shin et al (1990) for the Korean elderly	hierarchical multiple linear regression	-
	elderly living with spouse or children elderly living alone with healthy psychological and physical factors	2011	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Park,Seon Hee Ko, Su Hee Park,Hyun Suk	survey	908 participants ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow·Newcomb·Bentler, 1986) translated by Kim(2002)	multiple regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	social activity - mediating effect	2012	Lee, Myo Sook	survey	830 participants ages 65 and over	South Korea	Suicidal Ideation Scale by Harlow et al.(1986) translated by Kim(2002)	Anova, SEM	Activity Theory, exchange theory
	Subjective Health Perceptions and Quality of Life	2012	Oh, Chang-Seok	the South Korea National Health and Nutrition Examination Survey of 2010	1,478 participants ages 65 and over (23%)	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?"	Logistic Regression	-
	perceived good health, religion	2013	Kwak, Yun-Bock Ko, Sung-Hee Kim, Hyun-Kyung	Survey	245 participants ages 65 and over	South Korea	Scale for Suicidal Ideation (SSI) by Beck, Kovacs and Weissman (1979) translated and adapted by Shin et al (1990) for the Korean elderly	Multiple regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Individual	participants with health insurance, high self-perceived health and sleep satisfaction	2014	Park, Keum Sook Kim, Young Hee Lee, Kyoung Wan Lyu, Yeoung Su Jeong, Heon Young	survey	165 participants ages 65 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS) translated and adapted by Kim(2002) (Suicide Ideation Scale)	multiple regression	-
	social support and person's sense of mastery	2007	Eom, Tae-Wan	survey	297 participants ages 65 and over	South Korea	by Harlow et al.(1986) translated by Kim(2002)	multiple regression analysis	-
	social support - moderating effect						Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated by Cho(2008)	multiple regression	-
	perceived health status, social support, life satisfaction	2012	Yang,Nam-Young Moon,Sun-young	survey	123participants ages 65 and over	South Korea		multiple regression	-
	Economic Situation elderly living with spouse or children elderly living alone with healthy psychological and pshysical factors, perceived economic status.	2011	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Park, Seon Hee Ko, Su Hee Park,Hyun Suk	survey	908 participants ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow-Newcomb-Bentler, 1986) translated by Kim(2002)	multiple regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	perceived health status, social support, life satisfaction	2012	Yang, Nam-Young Moon, Sun-young	survey	123 participants ages 65 and over	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated by Cho(2008)	multiple regression	-
-	supportive network.; family, adult married children, economic welfare, subjective health	2014	Oh, Young Eun Lee, Jeong Hwa Shin, Hyo Yeon	survey	522 participants ages 60 and over elderly single and couple households	South Korea	SIQ : Suicidal Ideation Questionnaire) by Reynolds(1987) and (GSIS: Geriatric Suicide Ideation Scale) by Hesel and Flett(2006)	multiple regression	social network by Antonucci(1986)
	family support and self-esteem	2010	Seo, Hee Suk Jung, In Sook	survey	182 participants ages 60 and over	South Korea	(Beck Scale for Suicide Ideation [Beck, Kavacs, & Weissman, 1979]) translated by Shin, M. S. (1992)	t-test, ANOVA, Scheffe's test, Dunnett T3 and Pearson Correlation Coefficients	-
Individual	Age perceived health status, social support, life satisfaction, age moderating effect	2012	Yang, Nam-Young Moon, Sun-young	survey	123 participants ages 65 and over	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated by Cho(2008)	multiple regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theor y
Individual	good subjective health status, living spouse and having children who live in seperative house - holds, age	2014	Lee, Hyunkyung Kim, Mi Sun Choi, Seungsun Choi, Mankyu	2011 National Health and Nutrition Survey	1,447 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?"	logistic regression	Eco-system approach by Kemp(1998)
	social support, acculturation	2012	Ahn, Joon Hee	survey	220 South Korean American ages 65 and over	South Korea	Beck, Kovacs and Weissman (1979)'SSI(Scale for Suicidal Ideation) translated by Park and Shim(1990)	a path analysis with a multi group analysis	-
	Other Factors								
	Self-efficacy	2010	Kim, Meer Ryoung	survey	264 participants ages 60 and over	South Korea	Osman et al(1998)'s PANSI	multiple regression	
	Self-efficacy	2009	Park, Mi Jin	survey	295 participants ages 65 and over	South Korea	scocco and leo 2002	multiple regression	-
	social support and self-efficacy - mediating effects	2013	Jeong, Il-Young	secondar y data 2010 Seoul Welfare Panel	1,429 participants ages 65 and over	South Korea	Sucidal Ideation: SSI by Beck et al.(1979) adapted	Structural Equation Modeling, and sobel test	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	resilience	2010	Choi,Jung Min	survey	208 participants ages 60 and over	South Korea	SSI: Beck, Kovacs and Weissman, 1979	multiple regression	resilience theory
	resilience	2014	Park, Jong Suk Park, Yong Kyung Jeong, Seong Hwa Lee, Chae Shik Kim,Hong	survey	335 participants ages from 65 to 85	South Korea	SSI: Beck, Kovacs and Weissman, 1979	multiple regression	resilience theory
	meaning of life	2012	Kim,Hyun Ji Kwon,Jung Hye	survey	240 elderly ages 60 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	structural equation modeling	–
	Computer and internet literacy and cellular phone possession	2013	Lee, Yoon-jung	2011 national survey of the elderly life conditions	6,774 participants ages 60 and above	South Korea	Have you considered committing suicide	multiple regression and logit analysis	–

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Family level	facing reality, survival skills, constructing view of life, informal and formal social support including religion, enjoyign hobby	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-depth interview	5 South Korea American participants ages 65 and over	US	-	A phenomenological research method by Giorgi (2005)	-
	Support from Family								
	the preparation for old age including economic and psychological welfare and family solidarity self efficacy, meeting frequency of friends and adult children	2014	Jung,Myung-Hee Kim,Eun-Jeong	survey	468 participants ages 65 years and over	South Korea	SIS (Suicide Ideation Scale, Harlow·Newcomb ·Bentler, 1986) translated by Kim(2002)	multiple regression	-
-	supportive network.; family, adult married children, economic welfare, subjective health	2010	Kim,Meer Ryoung	survey	264 participants ages 60 and over	South Korea	Osman et al(1998)'s PANSI	multiple regression	
-	supportive network.; family, adult married children, economic welfare, subjective health	2014	Oh, Young Eun Lee, Jeong Hwa Shin, Hyo Yeon	survey	522 participants ages 60 and over elderly single and couple households	South Korea	SIQ : Suicidal Ideation Questionnaire) by Reynolds(1987) and (GSIS: Geriatric Suicide Ideation Scale) by Hesel and Flett(2006)	multiple regression	social network by Antonucci(1986)

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	familism, living in a rural area	2014	Park, Joon-Shik, Kim Young Bum	the successful aging for the South Korean people	1,000 participants ages 20 and above	South Korea	Yes or No	binary logit Analysis, , Multiple regression analysis	Socio Emotional Selective Theory
	family support and self-esteem	2010	Seo, Hee Suk Jung, In Sook	survey	182 participants ages 60 and over	South Korea	(Beck Scale for Suicide Ideation [Beck, Kavacs, & Weissman,1979]) translated by Shin, M. S. (1992)	t-test, ANOVA, Scheffe's test, Dunnett T3 and Pearson Correlation Coefficients	-
	family / friend support	2011	Lee, InJeong	survey	359 participants ages 65 and over	South Korea	(Beck Scale for Suicide Ideation [Beck, Kavacs, & Weissman,1979] translated and adapted by author for the Korean elderly	multiple regression	stress-diathesis model
	help from others and participating in social activities	2010	Kim,Dong Bae Park, Seo Young	survey	800 participants ages 60 and over	South Korea	Suicide Ideation Scale, Harlow·Newcomb·Bentler, 1986	multiple regression, sobel test for Mediating Effects	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	familial help and support, caring for own child	2012	Choi,Sin-Ae Ha,Kyu-Soo	survey	274 participants ages 55 and over caring for a chronic invalid adults	South Korea	Based on Beck, Kavacs, Weissman[1979] translated and adapted by Choi(2008).	hierarchial regression analysis	ecological theory
	having many friends and neighbors	2008	Jo, Kae-Hwa, Kim, Yeong-Kyeong	survey	219 participants ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	-
	support from friends - buffer effects	2005	Bae, Ji Yeon Kim,Won Hyung Yoon, Kyeong A	survey	265 participants ages 60 and over	South Korea	Based on Beck"s(Beck Scale for Suicide Ideation, SSI) translated by Shin et al(1990)	multiple regression	-
	family resilience, especially, the family resources and communication.	2013	Lee,Young Kyung Jung, Myung Hee	survey	188 participants ages 65 and over	South Korea	Scale for Suicide Ideation(SSI : Beck, Kovas & Weissman, 1979) translated and adapted by Park and Shin(1990)	Multiple regression analysis	family resilience theory

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theor y
Family level	Marriage Status and Quality of Marriage								
	elderly living with spouse	2009	Han, Samsung Kang, Sungwook Yoo, Wangkeun Phee, Young Gyu	the South Korea National Health and Nutrition Examination Survey in 1998, 2001, and 2005	1,097 people 65 and over in 2005 978 people 65 and over in 2001 1,044 people 65 and over in 1998	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?"	multiple logistic regression	Psychologic al theory (Osgo od, et al., 1986). and sociol ogical theory (Durk heim, 1951).
	living with spouse, relationship satisfaction with family, and adult children.	2015	Doh, Moonhak Hoe, Maanse	South Korea Welfare Panel Study 6th wave, 2011	3,089 participants ages 65 and over (12%)	South Korea	Yes or No	logistic regression, ROC Curve Analysis	Ecolog ical System Theor y

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theor y
	good subjective health status, living spouse and having children who live in seperative house - holds	2014	Lee, Hyunkyung Kim, Mi Sun Choi, Seungsun Choi, Mankyu	2011 National Health and Nutrition Survey	1,447 participants ages 65 and over	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?	logistic regression	Eco-system approach by Kemp(1998)
	elderly living with family	2012	Sohn, Jung Nam	survey	378 participants ages 65 and over : [190 older adults living alone and 188 older adults living with sb]	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated and adapted by Shin et al(1990)	t-test, ANOVA(Duncan test), Pearson's r,	-
	elderly living with spouse or children elderly living alone with healthy psychological and pshysical factors, perceived economic status.	2011	Kim, Ki Tae Choi, Song Sik Park, Mi Jin Park, Seon Hee Ko, Su Hee Park,Hyun Suk	survey	908 participants ages 65 and over	South Korea	This study utilized SIS (Suicide Ideation Scale, Harlow·Newcomb·Bentler, 1986) translated by Kim(2002)	multiple regression	-
	marital intimacy: moderating effect	2013	Park, Hye Ok Yook,Sung Pil	survey	447 participants ages 60 and over	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation)	Path Analysis	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Family level	Responsibility for Family and Children								
	familial help and support, caring for own child	2012	Choi, Sin-Ae Ha, Kyu-Soo	survey	274 participants ages 55 and over caring for a chronic invalid adults	South Korea	Based on Beck, Kavacs, Weissman[1979] translated and adapted by Choi(2008).	hierarchical regression analysis	ecological theory
	having many friends and neighbors , Responsibility for family	2008	Jo, Kae-Hwa, Kim, Yeong-Kyeong	survey	219 participants ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	-
	facing reality survival skills constructing view of life, informal and formal social support including religion, enjoyign hobby, responsibility for family	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-depth interview	5 South Korea American participants ages 65 and over	US	-	A phenomenological research method by Giorgi (2005)	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Community Level	social activities - moderating effects	2015	Kim, Jung Woo Shin, Yong Seok	survey	796 participants living alone	South Korea	Beck et al.(1979)'s Scale for a Suicide Ideation: SSI translated and adapted by Shin et al(1990)	structural equation modeling and multi-group analysis	the escape theory by Baumeister(1990) Suicide Theory by Baumeister(1990)
	social support - moderating effects	2014	Park, Bonggil, Song, Inseok	survey	572 people 65 years of age and older living alone	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	structural equation modeling	Theory by Baumeister(1990)
	participating in social activities	2010	Song, Young-dal . Son, Ji-a . Park, Soon-mi	survey	222 people 65 and over living alone	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated and adapted by Shin et al (1990)	multiple regression	Eco-system approach by Kemp(1998)
	support from friends - buffer effects	2005	Bae, Ji Yeon Kim,Won Hyung Yoon, Kyeong A	survey	265 participants ages 60 and over	South Korea	Based on Beck's(Beck Scale for Suicide Ideation, SSI) translated by Shin et al(1990)	multiple regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
-	support from friends	2011	Seo, In Kyun Ko, Min Seok	survey	969 participants ages 65 and over	South Korea	(Suicide Ideation Scale) by Harlow et al.(1986) translated by Kim(2002)	hierachical regression	social support theory
	having many friends and neighbors	2008	Jo, Kae-Hwa, Kim, Yeong-Kyeong	survey	219 participants ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	-
	social support and person's sense of mastery	2007	Eom, Tae-Wan	survey	297 participants ages 65 and over	South Korea	(Suicide Ideation Scale) by Harlow et al.(1986) translated by Kim(2002)	multiple regression analysis	-
	social support - moderating effect						Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS) after translated and adapted by Kim(2002)		
	social support - mediating effects	2013	Lee, Geum-yong Cho, Eunhye	survey	399 participants ages 65 and over	South Korea		structural equation modeling	

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	social support - moderating effects	2015	Lee, Hye Kyung Kwon, Ju Hyun	survey	303 participants ages 65 and over	South Korea	Beck, Kovacs and Weissman(1979)'S SI (Scale for Suicidal Ideation) translated and adapted by Shin et al (1990)	multiple regression	-
	perceived health status, social support, life satisfaction	2012	Yang, Nam-Young Moon, Sun-young	survey	123 participants ages 65 and over	South Korea	Beck, Kovacs and Weissman (1979)'SSI (Scale for Suicidal Ideation) translated by Cho(2008)	multiple regression	-
	high meaning of life and perceived social support perceived social support - mediating effects	2012	Kim, Hyun Ji Kwon, Jung Hye	survey	240 elderly ages 60 and over	South Korea	Harlow, Newcomb and Bentler(1986)'s (Suicide Ideation Scale: SIS)	structural equation modeling	-
	having many friend and neighbors	2008	Jo, Kae-Hwa, Kim, Yeong-Kyeong	survey	219 participants ages 60 and over	South Korea	Based on (Scale for Suicidal Ideation, SSI) by Beck et al(1979) translated and adapted by Shin (1992)	multiple regression	-

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
Macro Level	facing reality, survival skills and constructing view of life, informal and formal social support including religion, enjoyign hobby	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	–	A phenomenological research method by Giorgi (2005)	–
	social support and self-efficacy - mediating effects	2013	Jeong, Il-Young	secondar y data 2010 Seoul Welfare Panel	1,429 participants ages 65 and over	South Korea	Sucidal Ideation: SSI by Beck et al.(1979) adapted	Structural Equation Modeling, and sobel test	–
	support from Government	2014	Lee, Hyunkyung Kim, Mi Sun Choi, Seungsun Choi, Mankyu	2011 National Health and Nutrition Survey	1,447 participants ages 65 and over (21.6%)	South Korea	Yes or No question regarding " Have you ever seriously thoughts about suicide during the past 1 year?	logistic regression	Eco-system approach by Kemp(1998)
	support from Government	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	–	A phenomenological research method by Giorgi (2005)	–

Table 1-2. Continued

Level	Protective Factor	Year	Author	data source	Participants & (SI Prevalence)	Area	Measurement for DV	Analysis methods	Theory
	Living Area	2014	Park, Joon-Shik, Kim Young Bum	the successful aging for the South Korean people 2011	368 participants ages 65 and over among 1,000 participants ages 20 and above	South Korea	Yes or No	binary logit Analysis, , Multiple regression analysis	Socio Emotional Selective Theory
	Attitude toward Older Adults in the Society	2015	Lee, Mee-Ae	Elderly Living Condition Survey database	10,103 Participants ages 61 and over (11%)	South Korea	Yes or No regarding "Have you ever considered suicide after age 61 years?"	logistic regression	Social Quality Theory

Table 1-3.
Protective Factors Against Suicidal Ideation Among Community Dwelling Older Adults in the U. S

Level	Protective Factor	Year	Author	data source	Participants & (Prevalence of SI)	Area	Measurement for DV	Analysis methods	Theory
Individual	Spiritual/ Religiosity								
	greater church attendance, perceived social support-mediating effect between public religious activity and suicidal ideation	2013	Rushing, N.C.a , Corsentino, E.a, Hames, J.L.a, Sachs-Ericsson, N.a, Steffens, D.C	survey	Participants were 248 ages 59 years and older with inpatient or outpatient psychiatry services (endorsed 72.8% life time)	US	the suicidal thoughts item from the Montgomery–Asberg Depression Rating Scale(MADRS; Montgomery & Asberg, 1979)	hierarchic al linear regression analysis	network theory
	religiosness ethnicity - moderating effect	2009	June, Andrea; Segal, Daniel L.; Coolidge, Frederick L.;	survey	37European American older adults ages from 60 to 85 years old, 35 African American older adults ages from 62 to 86 years	US	_RFL reasons for living(Linehan et al, 1983)	ANOVA, sequential regression analysis	–
Individual	Coping Strategies								
	positive age stereotypes	2014	Levy, B.R.a , Pilver, C.E.b, Pietrzak, R.H.c	the National Health and Resilience in Veterans Study	2,031 Veterans Participants ages 55 and over (Full Resistance:5% Full Acceptance:30%)	US	two questions from the Patient Health Questionnaire-9 (Kroenke et al., 2009)	multivariate -logistic- regression models multivariate -linear regression models	stress- vulnerabi lity model (Rozano v and Carli, 2012)

Table 1-3. Continued

Level	Protective Factor	Year	Author	data source	Participants & (Prevalence of SI)	Area	Measurement for DV	Analysis methods	Theory
	Problem- and emotion-focused coping	2010	Meghan A. Marty, Daniel L. Segal and Frederick L. Coolidge	survey	108 older adults ages 65 to 95 years (GSIS(M) 50.69, SI(M):14.74)	US	Geriatric suicide ideation scale(GSIS)	multiple regression	–
Individual	Other Factors facing reality, survival skills, constructing view of life, informal and formal social support including religion, enjoyign hobby	2011	Jo, Kae Hwa - Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	–	A phenomen ological research method by Giorgi (2005)	–
	trait positive affect age-moderating effect	2007	Hirsch, J.K.ab, Duberstein, P.R.b, Chapman, B.b, Lyness, J.M.	survey	462 participants ages 65 and older (8%)	US	the rater administered Structured Clinical Interview for DSM–IV (SCID; Spitzer, Williams, & Gibbon, 1986) and the Hamilton Rating Scale for Depression (HRSD; Hamilton, 1960; Williams, 1988)	multivariable logistic regression	–

Table 1-3. Continued

Level	Protective Factor	Year	Author	data source	Participants & (Prevalence of SI)	Area	Measurement for DV	Analysis methods	Theory
	Self - forgiveness	2016	Jennifer S. Cheavens, Kelly C. Cukrowicz, Ryan Hansen1 and Sean M. Mitchell	survey	91 participants, ages 60 years or older	US	Geriatric Suicide Ideation Scale- Suicide Ideation Subscale (GSIS-SI).(Heisel&Flett, 2006)	A hierarchical multiple regression	The interpersonal theory of suicide(Joiner, 2005)
	effective depression treatment - mediating effect	2007	Vannoy, S.D.ae, Duberstein, P.b, Cukrowicz, K.c, Lin, E.d, Fan, M.-Y.a, Unützer, J.a	data from project IMPACT	1,801 participants ages 60 and over (14%)	US	SI was operationalized using one item from the Hopkins Symptoms Checklist (HSCL-20)	multiple logistic regression	-

Table 1-3. Continued

Level	Protective Factor	Year	Author	data source	Participants & (Prevalence of SI)	Area	Measurement for DV	Analysis methods	Theory
Family level	Support from Family								
	perceived emotional support from family	2012	Lincoln, Karen D.; Taylor, Robert Joseph; Chatters, Linda M.	The National Survey of American Life: coping with stress in the 21st Century (NSAL)	6,082 participants age 18 or older, including 3,570 African Americans, 891 non-Hispanic whites, and 1,621 blacks of Caribbean [1,141 participants ages 55 and over] (11%)	us	Have you ever seriously thought about committing suicide?'	multivariate analyses, logistic regression	Durkheim's framework
Family level	Responsibility for Family and Children								
	facing reality survival skills constructing view of life, informal and formal social support including religion, enjoyign hobby, responsibility for family	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	-	A phenomenological research method by Giorgi (2005)	-

Table 1-3. Continued

Level	Protective Factor	Year	Author	data source	Participants & (Prevalence of SI)	Area	Measurement for DV	Analysis methods	Theory
Community Level	facing reality, survival skills and constructing view of life, informal and formal social support including religion, enjoyign hobby	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	–	A phenomenological research method by Giorgi (2005)	–
	subjective social support	2006	Rowe, J.L.abc , Conwell, Y.b, Schulberg, H.C.a, Bruce, M.L.	survey	522 older adults ages 65 and over (11.7%)	us	SCID(Structured Clinical Interview for DSM-IV I Disorders), HRSD(Hamilton Rating Scale for Depression)	multivariate logistic regression	–
	religiosness ethnicity - moderating effect	2009	June, Andrea; Segal, Daniel L.; Coolidge, Frederick L.;	survey	37European American older adults ages from 60 to 85 years old, 35 African American older adults ages from 62 to 86 years	US	_RFL reasons for living(Linehan et al, 1983)	ANOVA, sequential regression analysis	–

Table 1-3. Continued

Level	Protective Factor	Year	Author	data source	Participants & (Prevalence of SI)	Area	Measurement for DV	Analysis methods	Theory
Macro Level	greater church attendance, perceived social support-mediating effect between public religious activity and suicidal ideation	2013	Rushing, N.C.a , Corsentino, E.a, Hames, J.L.a, Sachs-Ericsson, N.a, Steffens, D.C	survey	Participants were 248 ages 59 years and older (endorsed 72.8% life time)	US	the suicidal thoughts item from the Montgomery–Asberg Depression Rating Scale(MADRS; Montgomery & Asberg, 1979)	hierarchical linear regression analysis	network theory
	support from Government	2011	Jo, Kae Hwa · Sohn, Ki Cheul	in-deapth interview	5 South Korea American participants ages 65 and over	US	–	A phenomenological research method by Giorgi (2005)	–

Chapter II

The Impact of Protective Factors on Suicidal Ideation Among Community-Dwelling Older

Adults with Experience of Spousal Physical Abuse:

Focusing on Direct and Indirect Effects

Chapter 2, in full has been submitted to *Journal Aging and Mental Health*

Authors: Sukyung Yoon and dissertation committee members (Drs. Sherry Cummings, William R. Nugent, Shandra Forrest-Bank). The dissertation/thesis author was the primary investigator and author of this paper.

Abstract

Purpose of the Study: The purpose of the current research was to investigate the impact of protective factors – including problem-focused coping, emotion-focused coping, having as a confidant either a family member or friends, and social support from friends or neighbors -- on suicidal ideation among older adults using the Wisconsin Longitudinal Study (WLS) data. In addition, this study investigated the indirect effects of various protective factors on suicidal ideation as mediated by depressive symptoms among older adults who have experienced physical abuse from a spouse/ romantic partner.

Method: The Wisconsin Longitudinal Study (WLS) was used. The current study sample was comprised of respondents who reported a history of being physically abused by a spouse or romantic partner. A path analysis using Mplus was employed to identify protective factors against suicidal ideation.

Results: Problem-focused coping and social support had negative indirect effects on suicidal ideation as mediated by depressive symptoms. Emotion-focused coping had positive direct and indirect effects on suicidal ideation

Implication: Tailored services to boost protective factors and regular screening tests are imperative to reduce depressive symptoms and suicidal ideation among older adults who have experienced spousal or romantic partner' s physical abuse

Keywords: suicidal ideation, protective factors, community-dwelling older adults,
spouse/partner physical abuse

Introduction

Intimate Partner Violence (IPV) is a critical public health issue worldwide (Organization, 2013). IPV in later life is expected to rise as baby boomers age (Roberto, McPherson, & Brossoie, 2013). IPV negatively impacts the mental health of victims (Campbell, 2002; Carbone-López, Kruttschnitt, & Macmillan, 2006). Research has shown that women who have experienced IPV are at risk of depression in the future regardless of whether or not the IPV continues (Chuang et al., 2012). In the same vein, researchers have found that the representative “psychological sequelae” among women with intimate partner violence is depression (Forte, Cohen, Du Mont, Hyman, & Romans, 2005, p. 251).

This depression may lead victims to experience suicidal ideation or make suicide attempts (Davis, Witte, & Weathers, 2014; Golding, 1999; Kramer, Lorenzon, & Mueller, 2004; Romito & Grassi, 2007; Thompson, Kaslow, & Kingree, 2002). Further, research using data from eight countries found that spousal physical abuse over a lifetime was highly associated with suicidal ideation (Organization, 2002). Although depression is one of the primary factors triggering suicidal ideation and suicide in later life (Alexopoulos, Bruce, Hull, Sirey, & Kakuma, 1999; Conwell, 1997; Gottfries, 2001; Lange, 2003; Waern, Rubenowitz, & Wilhelmson, 2003), not all older adults with depression have suicidal ideation (I. Lee, 2011; McLaren, Gomez, Bailey, & Van Der Horst, 2007). These findings suggest that there may be factors that protect depressed older adults against suicidal thoughts (I. Lee, 2011). Finding protective factors against suicidal ideation among older adults who have experienced spousal or partner physical abuse may help this population avoid suicidal ideation even if they have depressive symptoms. Annually, over 13,000 females aged 55 and above were reported as victims of nonlethal abuse by their intimate partners (Rennison & Rand, 2003). However, to date, research about IPV has been

more likely to focus on younger generations and on risk factors and to include every kind of domestic violence or physical abuse from both spouse and other family members rather than physical abuse from a spouse or partner (Afifi et al., 2009; Bonomi et al., 2006; Brandl & Meuer, 2000; Chan, 2011; Cho, 2012; Coker, Davis, et al., 2002; Coker, Weston, Creson, Justice, & Blakeney, 2005; Devries et al., 2013; Seaver, 1997; Zlotnick, Johnson, & Kohn, 2006).

Protective Factors against Suicidal Ideation

Previous research has reported coping and social support as protective factors among older adults with challenging situations, including stressful life events, marital strain, and IPV (Kong & Moorman, 2013; Pearlin, Mullan, Semple, & Skaff, 1990; Penninx et al., 1997; Swindells et al., 1999; Zink, Jacobson Jr, Pabst, Regan, & Fisher, 2006).

Coping. According to Lazarus and Folkman (1980), coping involves both cognition and behaviors (Folkman & Lazarus, 1980). The most common types of coping are problem-focused and emotion-focused (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Problem-focused coping refers to behaviors in which an individual acts directly to alter the sources of their stress; emotion-focused coping refers to cognitive efforts by an individual to change their perceptions of the bad feelings resulting from a stressful experience (Horwitz, Hill, & King, 2011). Coping strategies against stress have been found to negatively mediate the relationship between stress and suicidal ideation (MY Lee & Nam, 2007; Y. Song et al., 2013). Active coping has been found to have a negative direct effect on suicidal ideation among South Korean older adults with both stress and experience of abuse (Chun & Ahn, 2011; Jeong & Kim, 2014; J. Jeong & J. Kim, 2015). Female victims of IPV had significantly lower mean scores on problem-focused coping strategies than females who had not experienced IPV (Craparo, Gori, Petrucci, Cannella, & Simonelli, 2014). Older women who experienced IPV

tended to use emotional focused coping, and older women using problem-focused coping skills were shown to live more actively than older women using emotion-focused coping, even though they had experienced IPV (Zink et al., 2006). In the same vein, emotional focused coping strategies have been related to increased depression (Chuang et al., 2012). Lynch et al. (2004) revealed that among depressed older adults, emotion-focused coping strategies such as avoidance and suppression increased suicidal ideation (Lynch, Cheavens, Morse, & Rosenthal, 2004). Further, one kind of emotion-focused coping-- self-blame-- has been related to suicidal ideation via its association with depression (Horwitz et al., 2011). Emotion-oriented coping has been found to have a direct impact on suicidal ideation and also to increase suicidal risk by mediating depression (Wang, Nyutu, & Tran, 2012). People may have different levels of stress about problematic issues they experience depending on their coping strategies (Folkman & Moskowitz, 2004). Effective and appropriate coping is an important individual level protective factor against depression and suicidal thoughts among older adults with experiences of spousal or partner physical abuse (Horwitz et al., 2011; Lynch et al., 2004).

Social Support from Friends or Neighbors. Recently, the number of single elderly households has risen sharply due to such conditions as family discord, divorce or spousal deaths (I. Lee, 2011; Y. D. Song et al., 2010). At the community level, social support from friends and/or neighbors is another crucial protective factor against depressive symptoms for older adults (June et al., 2009; Rushing et al., 2013; I. Seo & Ko, 2011). Researchers have reported that social support from friends or neighbors is a vital factor for individuals' mental and physical health under psychological and life challenging conditions, including experience of IPV (Ai, Pappas, & Simonsen, 2015; Coker, Smith, et al., 2002; Coker, Watkins, Smith, & Brandt, 2003; Edelstein et al., 2009a; S.-H. Lee, Tsai, Chen, & Huang, 2014; Rowe, Conwell, Schulberg,

& Bruce, 2006). Conversely, older adults with a lower sense of belongingness to the community are more likely to have depression and suicidal ideation (Bailey & McLaren, 2005). In addition, although depression is one of the key factors triggering suicidal ideation, social support may be a crucial protective factor against suicidal ideation from depression (Corna, Cairney, & Streiner, 2010; I. Lee, 2011).

Having a Confidant. One pivotal finding from previous research regarding social support is that the quality of relationships may be more important than marital status or the number of networks in which a person is involved (I. Lee, 2011; Y. E. Oh et al., 2014). Reliable and close relationships may strengthen older adults' self-esteem and sense of belonging, two significant individual-level qualities that can defeat suicidal ideation (J. Y. Bae et al., 2005; Lincoln et al., 2012). Having a confidant means individuals can share their private feelings and concerns (Connidis & Davies, 1990, 1992). Confidants can provide security, convey belongingness, and offer comfort (Dunér & Nordström, 2007). Researchers have reported that having a confidant correlates with better physical and mental health outcomes among older adults who have lost their spouses, or who have dealt with cancer or suffered depression (Bookwala, Marshall, & Manning, 2014; McPherson, Smith-Lovin, & Brashears, 2006; Newton et al., 2008). Furthermore, Conwell et al., (2011) found that older adults with confidants had significantly lower suicide rates (Conwell, Van Orden, & Caine, 2011). However, there is little research examining the impact on depressive symptoms and suicidal ideation of having both a family confidant and a friend confidant simultaneously.

Although there are numerous studies investigating the impact of protective factors on depression or on suicidal ideation (J. Y. Bae et al., 2005; Chun & Ahn, 2011; Connidis & Davies, 1992; Craparo et al., 2014; Eom, 2007; Marty et al., 2010), no research exists that examines the

impact of protective factors on depressive symptoms and on suicidal ideation, both separately and simultaneously, while also investigating the indirect effects of various protective factors on suicidal ideation as mediated by depressive symptoms among older adults who have experienced spousal/partner physical abuse. In addition, while some studies have investigated social support itself as a protective factor, few have compared degrees of quality in social support relationships such as having general social relations vs. having a close confidant.

The current research fills these gaps. It investigates the impact of various protective factors – both problem-focused coping and emotion-focused coping, having as a confidant either a family member or friends, and social support from friends -- on depressive symptoms and on suicidal ideation at the same time. It also investigates indirect effects of the various protective factors on suicidal ideation as mediated by depressive symptoms among community-dwelling older adults who have experienced spousal/ partner physical abuse based on stress process model (Pearlin, Menaghan, Lieberman, & Mullan, 1981). This research may improve our understanding of and thus our ability to intervene strategically to care for this forgotten population.

Theoretical Framework, SPM

The theoretical frame for this research is based on the Stress Process Model (SPM). (Pearlin et al., 1981). The SPM explains stressors, stress mediators and/or moderators and stress outcomes as interconnected elements in a process (Pearlin, 1989). Social support and coping have usually been used as intervening variables in the model (Kong & Moorman, 2013; Pearlin et al., 1990) . As shown in Figure 2.1, the Stress Process Model (SPM) has identified interconnections between stressors and psychological stress outcomes with intervening mediators (Pearlin, 1989; Pearlin et al., 1981). Pearlin (1989) point outs that one of the chronic strains of stressors is strife between wife and husband. However, most research applying the theoretical

framework has focused on caregivers (Kong & Moorman, 2013; Pearlin et al., 1990). Although there are studies based on the stress process model related to older populations in prison (Maschi, Viola, & Morgen, 2013) and impact of childhood (Kong & Moorman, 2013; Rutter, 1989), there is scant research using this conceptual foundation to study older populations who have experienced physical abuse from a spouse/partner. The present study extends and elaborates SPM in order to fit its research aims. Based on the Stress Process Model, the purpose of the study is to investigate the direct effects of protective factors (coping strategies, having confidants and social support from friends or neighbors) on simultaneous depressive symptoms and suicidal ideation among older adults who have experienced spousal/partner physical abuse. This research also examines the indirect effects of the protective factors on suicidal ideation to identify pathways that help to intervene effectively (Huth-Bocks, Levendosky, & Semel, 2001). This research attempts to offer theoretical and empirical guidance in related areas by deepening and extending our understanding of the impact of coping styles, social support and having confidants as protective factors against suicidal ideation among this population.

Research Questions

The research question of this study is “Does each protective factor under investigation-- both problem-focused coping and emotion-focused coping, having as a confidant either a family member or friend, and social support from neighbors or/and friends – directly impact both depressive symptoms and suicidal ideation and, simultaneously, does each protective factor also have indirect effects on suicidal ideation as mediated by depressive symptoms among older adults who have experienced spouse/ romantic partner physical abuse?”

Method

Participants

The present study used the Wisconsin Longitudinal Study (WLS) data, a longitudinal population-based random sample survey of 10,317 men and women who graduated from Wisconsin high schools in 1957 and 5,823 of their siblings who were randomly selected for inclusion in the sample. The survey on which the WLS is based was conducted via regularly repeated interviews by telephone and mailed questionnaires. In the 2004 wave, 6,845 graduates participated in the telephone survey and responded to mailed questionnaires. The present study used the wave of 2004 graduates whose participants were from 64 to 65 years of age (Easton & Kong, 2017; Hauser & Roan, 2006; Kong & Moorman, 2013). The WLS provides many individual, familial and social variables, including suicidal ideation. There are few other data sets offering such abundant individual, familial and social factors including the suicidal ideation variable among community-dwelling older adults. The current study sample was comprised of data only from respondents who reported a history of being physically abused by a spouse or romantic partner. A total of 475 cases (7.8% of 6,125 participants of the wave of 2004 graduates who completed surveys) were used for this study.

Measurement

Physical Abuse from a Spouse or Romantic Partner. Older adults who had experienced physical abuse were identified through use of the binary question, “Has your spouse, or romantic partner, ever treated you in a way that some would think of as physical abuse?” Answers were converted into dummy variables: yes (1) and no (0). This study sample consists of respondents who responded yes to this question, indicating that they have experienced spouse/partner physical abuse.

Depressive Symptoms. Research has reported that people with current depression have an increased likelihood of lifetime depression (Kroenke et al., 2009). Depressive symptoms were measured using a scale based on the Center for Epidemiologic Studies – Depression Scales (CES-D) (Radloff, 1977). This scale has been widely accepted to measure depression among older adults (Haringsma, Engels, Beekman, & Spinhoven, 2004). Depressive symptoms provided by the WLS were measured by having the participants report the number of days in the past week (0-7days) that they experienced each of twenty depression symptoms. For the current study, participants' responses were summed to render a total score ranging from 0 to 140, with higher scores representing higher levels of depressive symptoms. This study used the mean of the squared root of this numeric score due to kurtosis and skewedness. Only respondents who answered 17 or more of 20 items of the measurement were used for this study (Radloff, 1977). The Cronbach's Alpha is .90 for this sample.

Coping. Coping was measured by items based on the Brief Cope (Carver, 1997), an adaptation of the Coping Orientations to Problems Experienced Scale (Carver, Scheier, & Weintraub, 1989). Respondents were asked questions about what they generally do when experiencing a stressful situation, using a four-point scale where 1 is “I usually do not do this at all,” and 4 is “I usually do this a lot.” In the Brief Cope (Carver, 1997) scales, problem-focused coping is indicated by eight items ($\alpha = .83$). The problem-focused coping strategies in the survey were active coping, planning, positive-reframing and acceptance; the emotion-focused coping strategies were self-distraction, behavior disengagement, denial, self-blame and venting (Carver, 1997). Emotion-focused coping is indicated by ten items ($\alpha = .68$). The Cronbach's alpha for the emotion-focused coping scale was slightly lower than .70, the criterion (Tavakol & Dennick,

2011); however, factor analysis showed that the factor loading of each of the ten items had above /.5/ (Tabachnick & Fidell, 2008).

Social Support from Friends or Neighbors. Social support from friends was measured with four questions that were summed for the present study after converting negative items into reverse coding. The four items are “How much do they make you feel loved and cared for?”, “How much do they make too many demands on you?”, “How much are they willing to listen to you when you need to talk about your worries or problems?” and “How much are they critical of what you do?” All of these questions are about “friends and relatives other than their spouse or children”. Each item was measured using a five-point Likert scale from 1: “not at all” to 5: “a lot”. The total scores ranged from 4 to 20 with higher scores representing higher levels of social support. The Cronbach's Alpha of this study is .67. This social support scale has been extensively accepted by previous published aging-related studies (Ha, 2009; Kong & Moorman, 2013).

Confiding Relationship Among Family Members and Friends. Confiding relationships among family members were measured using the binary question, “Is there a person in your family with whom you can really share your very private feelings and concerns?” Answers were converted into dummy variables: yes (1) and no (0). Confiding relationships among friends were measured using the binary question, “Is there a friend outside your family with whom you can really share your very private feelings and concerns?” Answers were converted into dummy variables: yes (1) and no (0).

Suicidal Ideation. Suicidal Ideation (SI) was measured using the binary question, “Have you ever seriously thought about taking your own life?” Answers were converted into dummy variables: yes (1) and no (0).

Covariates.

Current perceived health. Current perceived health status is highly related to depressive symptoms and suicidal thoughts among older adults in the community (J. Y. Bae et al., 2005; Eom, 2007; Kwak et al., 2013). Kim and Choi (2007) showed that subjective perceived physical health significantly predicted suicidal ideation controlling for demographic variables and depression (SH Kim & Choi, 2007). High perceived health among older adults acted as a protective factor against suicidal ideation (Eom, 2007; B Park & Song, 2014; Yang & Moon, 2012). It was assessed by a five-point Likert scale from poor (1) to excellent (5).

Economic status. Economic status is also associated with the level of depressive symptoms and suicidal ideation among older adults in the community. Older adults with low economic status are more likely to have suicidal ideation (J. Y. Bae et al., 2005; N. G. Choi et al., 2015; K. Kim et al., 2011; Y. E. Oh et al., 2014; H. Seo & Jung, 2010). Economic status had a stronger impact on suicidal ideation for older male adults than for older female adults (Y. E. Oh et al., 2014; Yang & Moon, 2012). It was assessed by annual total income. The square root of the income variable was used due to high kurtosis and skewness of the variable (Tabachnick & Fidell, 2008).

Education. Community-dwelling older adults with lower education are more likely to have depressive symptoms and suicidal ideation (J. Y. Bae et al., 2005; Eom, 2007; M Lee, 2012; H.-S. Park & Park, 2015). It was assessed by years of education.

Sex. Both male and female victims of IPV may experience posttraumatic stress, depression and suicidal ideation (Devries et al., 2013; Golding, 1999; Romito & Grassi, 2007). Also, men and women show different rates of depressive symptoms, suicidal ideation, family relationship, social support and coping strategies (J. Jeong & J. Kim, 2015; Lapierre et al., 2011;

McLaren et al., 2015). Sex was measured with a binary question and responses coded as male (1) and female (0).

Data Analysis

A path analysis with M-plus 8.0 was employed to fit the path model and investigate the direct and indirect relationships among the variables (Klem, 1995). Because the dependent variable in this study was binary, a Weighted Least-Squares parameter estimates (WLSMV) method was employed (Honjo, Tsutsumi, Kawachi, & Kawakami, 2006; Muthén & Muthen, 2017). The fit of the hypothesized path model was evaluated using the Chi square value (χ^2), the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and the weighted root mean square residual (WRMR) (West, Taylor, & Wu, 2012). The path model was fit to the data using Mplus version 8. Given the likely violation of the multivariate normality assumption, 95% confidence intervals were estimated using bootstrapping (a bootstrap sample of 1,000 was specified).

Results

Missing Data

Missing data were identified by using SPSS 25 to analyze patterns of missing values. As Table 1 shows, the total missing values in this sample were 1.4%. The results of t-Test showed there was no significant difference between missing values and the dependent variable, suicidal ideation. The missing value patterns are distributed randomly through the results and can be assumed to be missing at random (MAR). To impute the missing values, a Maximum Likelihood estimation was used as recommended by Enders (Enders, 2010). Table 1 shows sample characteristics for missingness in this sample.

Descriptive Statistics

Before conducting the analysis, data characteristics were investigated using descriptive statistics on SPSS 25. Table 2.2 presents descriptive statistics of key variables. About 80% of the sample were females. About 40% of the sample responded that they perceived themselves to have “very good” health; about 30% of the sample perceived they were in “good” health (27.8%, $n = 132$); nearly 20% said they were in “excellent” health (19.6%, $n = 93$); about 8% said “fair” health (8.2%, $n = 39$); less than 5% said they were in “poor” health (4.8%, $n = 23$). Most of the sample had over 13 years of education, the mean income (total household income) was \$63,146/year. Over 80% of the sample had a family confidant and nearly 80% had a friend confidant. The mean of social support was 16.34; ($SD = 2.72$). The mean of problem-focused coping was 24.78 ($SD = 4.42$). The mean of emotion-focused coping was 19.66 ($SD = 4.10$). The mean of depressive symptoms was 18.25 ($SD = 17.65$). In addition, the relationship between experienced spouse/partner physical abuse and suicidal ideation was significant ($\chi^2(1) = 127.538, p < 0.001$) among the total WLS 2004 graduate wave. About 16% of the sample reported they had experienced suicidal thoughts in their life (16.6%, $n = 79$). For a path analysis, income and depressive symptoms values were indicated using squared root mean values due to high kurtosis and skewness.

Findings

The initial research path model included marital status and income as covariates. However, marital status was excluded from the path model due to unequal sample sizes (the smallest sample size has a ratio greater than 4 to 1). The research path model was then re-estimated. However, the model still did not converge. The findings indicated that the income variable was not significant for either depressive symptoms or suicidal ideation based on the

results of regression analysis using SPSS. After excluding the income variable from the model, the model convergence was obtained.

Table 2.2, 2.3 and 2.4 and Figure.2.3 show the results for the direct and indirect effects of protective factors against suicidal ideation. Overall, the final model fit indices were CFI= 0.91, RMSEA = 0.05, 90% CI [0.029, 0.075], WRMR = 0.90, $X^2(15) = 34.50$, $p < 0.05$. These results suggested an acceptable fit (Marsh, Hau, & Wen, 2004; West, Taylor, & Wu, 2012).

Direct Effects

Problem-focused coping significantly influenced depression negatively ($\beta = -0.184$, $SE = 0.042$, $p < 0.001$, 95% CI [-0.267, -0.101]). However, it did not have a statistically significant influence on suicidal ideation. Emotion-focused coping had a positive impact on both depressive symptoms ($\beta = 0.38$, $SE = 0.04$, $p < 0.001$, 95% CI [0.290, 0.461]) and suicidal ideation ($\beta = 0.15$, $SE = 0.07$, $p < 0.005$, 95% CI [0.008, 0.284]). Having a family confidant negatively influenced depressive symptoms; however, it did not meet statistical criteria at the 0.05 level ($\beta = -0.079$, $SE = 0.043$, $p = 0.065$). Therefore, having a family confidant did not significantly impact suicidal ideation in this sample. Having a friend confidant did not significantly influence either depressive symptoms ($\beta = -0.043$, $SE = 0.049$, $p > .05$) or suicidal ideation ($\beta = 0.073$, $SE = 0.077$, $p > 0.05$). Social support from friends or neighbors had a negative impact on depressive symptoms ($\beta = -0.22$, $SE = 0.05$, $p < 0.001$, 95% CI [-0.312, -0.130]); however social support did not have a statistically significant direct relationship with suicidal ideation in this sample. Depressive symptoms had the most powerful influence on suicidal ideation ($\beta = 0.23$, $SE = 0.09$, $p < 0.05$, 95% CI [0.062, 0.396]). Problem-focused coping, and social support from friends or neighbors had significant direct effects on depressive symptoms as protective factors. Emotion-focused coping had a significant and direct influence on both depressive symptoms and suicidal

ideation as a risk factor. Depressive symptoms had a direct and strong impact on suicidal ideation.

Indirect Effects

Social support, both types of coping skills, and health had statistically significant indirect effects on suicidal ideation as mediated by depressive symptoms. Social support had an indirect effect on suicidal ideation as mediated by depressive symptoms ($\beta = -0.051$, $SE = 0.021$, $p < 0.05$, 95% CI [-0.092, -0.009]). Problem-focused coping had an indirect effect on suicidal ideation as mediated by depressive symptoms ($\beta = -0.042$, $SE = 0.019$, $p < 0.05$, 95% CI [-0.079, -0.005]). Emotion-focused coping had an indirect effect on suicidal ideation as mediated by depressive symptoms ($\beta = 0.09$, $SE = 0.034$, $p < 0.05$, 95% CI [0.019, 0.153]). Health had an indirect effect on suicidal ideation as mediated by depressive symptoms ($\beta = -0.05$, $SE = 0.021$, $p < 0.05$, 95% CI [-0.096, -0.012]). Social support, problem-focused coping, and health had statistically significant indirect protective effects on suicidal ideation as mediated by depressive symptoms. Emotion-focused coping had significant indirect risk effects on suicidal ideation as mediated by depressive symptoms. However, the impact of indirect effects of emotion-focused coping on suicidal ideation was less than that of direct effects of emotion-focused coping on suicidal ideation.

Discussion

This study reveals that older adults with experiences of spouse/partner physical abuse have negative mental health. The current study shows that older adults who have experienced spouse/partner physical abuse suffer higher depressive symptoms than older adults who have experienced child abuse (Kong & Moorman, 2013). The mean of depressive symptoms among older adults who have experienced spouse/partner physical abuse in the WLS 2004 graduate

wave was 18.25($SD = 17.65$) in this sample. A previous study of older adults with experiences of child abuse using WLS data reported that the mean of depressive symptoms was 14.51 ($SD = 14.10$) (Kong & Moorman, 2013). In addition, analysis of the total WLS 2004 graduate wave shows significant differences ($t = 5.414, p < 0.001$) between the mean of depressive symptoms of people who have experienced spouse/partner physical abuse ($M = 17.57, SD = 16.44$) and people who have not experienced it ($M = 13.22, SD = 13.53$). In the current study, the mean of depressive symptoms among older adults with suicidal ideation was significantly higher than the mean of depressive symptoms among older adults without suicidal ideation ($t = 3.485, p < 0.01$). Regarding depressive symptoms, as previous research has shown, this study also finds that depressive symptoms have a positive and strong influence on suicidal ideation (Lange, 2003; Waern et al., 2003). Supporting previous research (Craparo et al., 2014), problem-focused coping had a negative impact on depressive symptoms among older adults who have experienced spousal/partner physical abuse. Although problem-focused coping did not have a significant direct impact on suicidal ideation among the sample, problem-focused coping had a negative indirect effect on suicidal ideation by mediating depressive symptoms. In other words, problem-focused coping reduced the level of depressive symptoms, which led to a decrease in suicidal ideation ($\beta = -0.042, SE = 0.019, p < 0.05, 95\% CI [-0.079, -0.005]$). This means problem – focused coping may be a crucial protective factor against suicidal ideation because of its efficacy in reducing depressive symptoms. The results regarding emotion-focused coping are consistent with previous studies (Chuang et al., 2012; Horwitz et al., 2011). Emotion-focused coping has positive direct and indirect impacts on both depressive symptoms and suicidal ideation respectively—increasing the risk of both. In this sample, the mean of emotion-focused coping of older adults with suicidal ideation had significantly higher than the mean of older adults without

suicidal ideation ($t = 3.653, p < 0.001$). The impact of emotion-focused coping was greater on depressive symptoms than on suicidal ideation. In addition, the impact of direct effects of emotion-focused coping on suicidal ideation was greater than the impact of indirect effects on suicidal ideation. Decreasing the use of emotional-focused coping may be an important protective factor against depressive symptoms and suicidal ideation among the population. Although both coping strategies are important factors influencing both depressive symptoms and suicidal ideation, as the results show, the impact of emotional-focused coping on mental health may be more serious among this sample. Efforts to boost problem-focused coping and reduce emotion-focused coping are imperative against depressive symptoms and suicidal ideation in this population.

The current research also investigated the differences between social support from friends/neighbors, and social support from a confidant as a factor influencing depression and suicidal ideation by looking into degrees of quality and closeness in relationships with a friend confidant as well as community social support. The results suggest that having a friend as confidant does not significantly impact depressive symptoms or suicidal ideation among the population, perhaps because there is an overlap between social support from friends and having a confidant as community level protective factors.

This study reports consistent results with previous research that social support from friends or neighbors helps reduce depressive symptoms (June et al., 2009; Rushing et al., 2013). In addition, it shows that social support has a significant indirect effect on suicidal ideation by mediating (reducing) depressive symptoms. This result suggests that even if sufferers of past or present abuse do not have any special private, personal relationships with close confidants,

having caring, and warm interactions at the community level, such as volunteers, social workers, neighbors and churches, may protect them against depressive symptoms and suicidal ideation. When it comes to indirect effects, elaborating on the Stress Process Model, this research demonstrates that although social support, problem focused coping and health did not have significant direct effects on suicidal ideation, they had indirect effects on suicidal ideation as mediated by depressive symptoms. Social support, problem-focused coping, and health act as protective factors against suicidal ideation by reducing depressive symptoms, the most powerful risk factor of suicidal ideation. As mentioned above, this research demonstrates that the disadvantages of negative, ineffective, and inappropriate coping skills are stronger and worse than the advantages of active, effective, and appropriate coping skills among this population.

Limitations

The first limitation of this research is that the sample was homogeneous. The influence of protective factors may differ among different samples (Min, Lee, & Chae, 2015). The WLS data consist of over 80% Caucasians who have at least a high school diploma and come from Wisconsin (Herd, Carr, & Roan, 2014). Therefore, it is not possible to generalize the results to every older adult in the U.S. A good direction for future research would be to examine populations with different racial and ethnic identities and different levels of education, which may provide new insights. Suicidal ideation and coping strategies may vary depending on race, ethnicity, and education levels (Chun & Ahn, 2011). Further, all the participants were in their 60s at the time of the survey. Results may differ among those who are in their 70's or above (Conwell et al., 2002). In addition, since measurements of IPV and SI are binary questions about lifetime experiences, it was not possible for the researcher to know the magnitude and frequency of physical abuse and suicidal ideation from the data. Also, recall that bias may exist. Another

limitation is that coping was measured by the COPE scales in this study; however, there may be other and better ways to investigate individuals' coping styles in their daily living beyond the scales for older adults. Finally, this is cross-sectional research. Qualitative and longitudinal research on these issues may provide a deeper understanding about these populations and the challenges that they face in dealing with the long-term effects of spousal abuse and the impact of protective factors against depressive symptoms and suicidal ideation among the older adults. In spite of these limitations, this research contributes to our understanding of the direct effects of protective factors (coping strategies, social support, and having confidants) on simultaneous depressive symptoms and suicidal ideation among older adults who have experienced spousal/partner physical abuse. Also, elaborating on the Stress Process Model, this research teased out significant indirect effects of the protective factors on suicidal ideation.

Implications for Practitioners, Educators and Researchers

This paper highlights the unresolved wounding and serious negative mental health consequences of older adults who have experienced spousal or partner physical abuse. The study findings provide a more nuanced understanding about the impact of protective factors, such as coping strategies, social support, and confidant relationships, on depressive symptoms and suicidal ideation among older victims of IPV, and underline how important it is to screen for experiences of IPV, depressive symptoms, and suicidal ideation among older adults.

This study revealed direct effects of each protective factor on depressive symptoms and suicidal ideation among the sample. Further, it informs us about the influence of each protective factor on suicidal ideation as mediated by depressive symptoms. This may help social workers and practitioners to make informed decisions about how to intervene and prevent suicidal

ideation among older populations with experience of spousal physical abuse during their lifespan, even if the incident was stopped long ago.

The development of appropriate support resources, especially boosting social support programs at community levels, and spreading the word about appropriate coping strategies—both to individuals who care for and live with this population and the older adults themselves. because the reason is that people who have experienced interpersonal traumatic events tend to have difficulty developing sound relationships with others (Van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005). Education may encourage family members and the older population themselves to nurture sound relationships. In addition, it may motivate members of the community to become gatekeepers against violence and, isolation and offer support to older people who are living with unresolved suffering from the past, or who may still need help and care in dangerous situations. In addition, this research may alert the needy to prevention programs of the necessity for timely intervention against IPV. Also, sound family relationships, screening of IPV, depressive symptoms, and suicidal ideation later in life, and appropriate coping strategies against IPV, depression, and suicidal ideation are necessary.

This research can inform the development of appropriate treatments for older adults with depressive symptoms or/ and suicidal ideation by practitioners, public health care providers, and other researchers. Clinicians and social workers may be encouraged to monitor whether people are suffering from violence, suicidal ideation, depressive symptoms, or isolation in later life (Chan, 2011), and to empower their clients to cope appropriately by offering education and resources. This research may enhance policy-makers' understanding of these complex issues, which, in the long-run, may lead to stronger laws and intervention systems against elder abuse,

including IPV and domestic violence for older marginalized populations (Brossoie, Roberto, & Barrow, 2012; Conwell et al., 2011).

Conclusion

Employing the Stress Process Model, the current research investigated the direct effects of protective factors on depressive symptoms and suicidal ideation simultaneously among older adults with experience of spouse/partner physical abuse. Problem-focused coping, emotion-focused coping, social support, and having a family confidant are important direct and indirect protective factors against depressive symptoms and suicidal ideation among older adults who have experienced spouse/partner physical abuse. Tailored interventions are imperative, both to boost protective factors, such as social support, problem-focused coping, and the development of close and sound relationships with family members, and to reduce risk factors, such as depressive symptoms and emotion-focused coping. In addition, screening experiences of IPV, depressive symptoms and suicidal ideation among older adults is necessary.

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Appendices

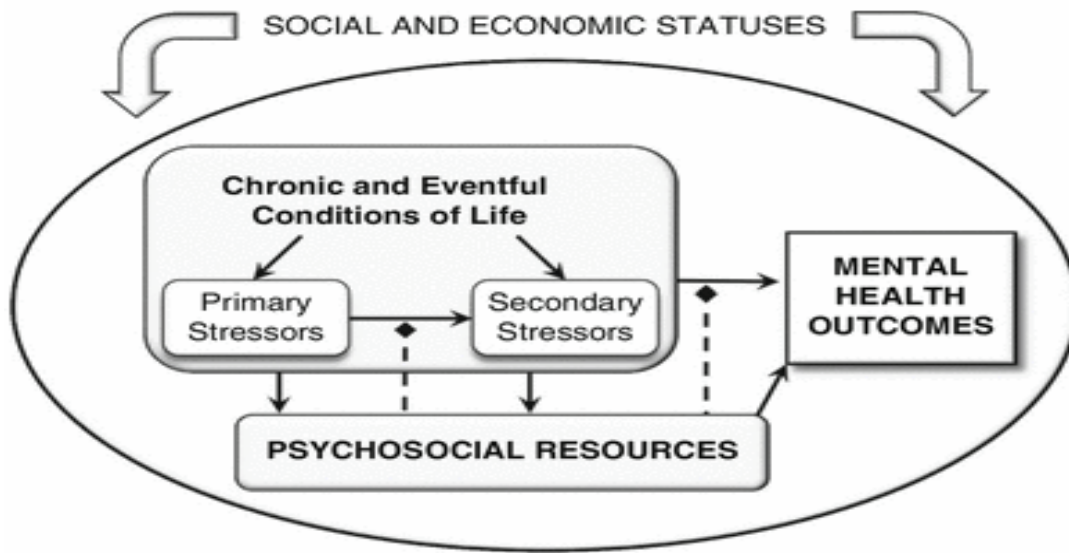


Figure 2.1. Stress Process p. 326 (Pearlin & Bierman, 2013)

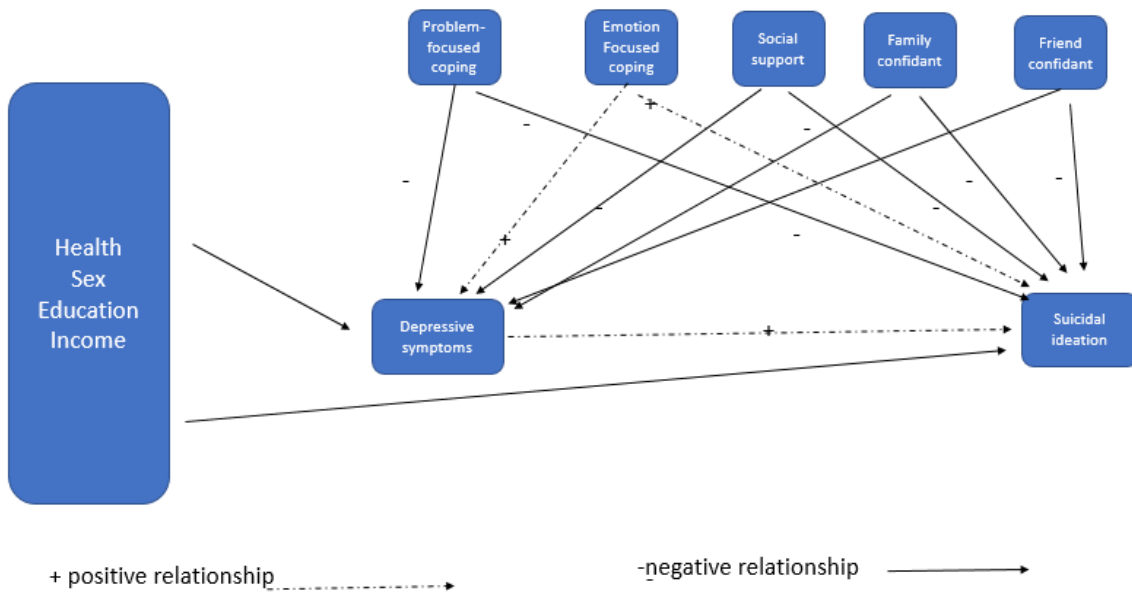
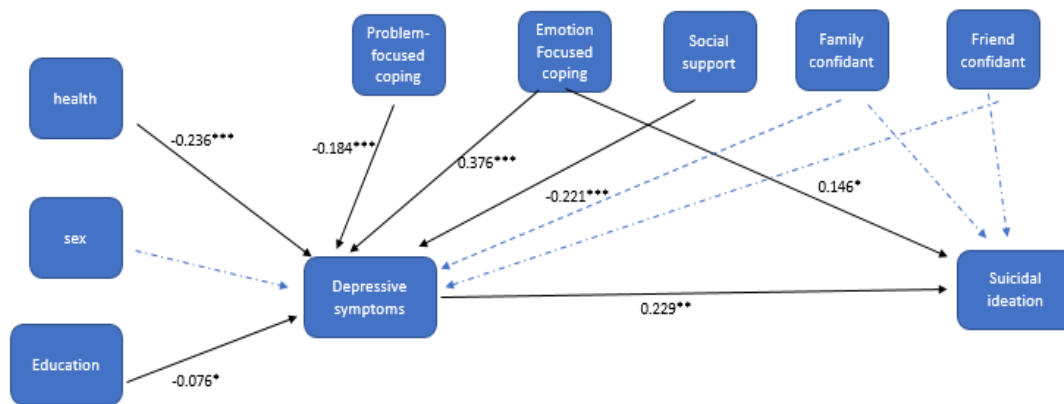


Figure 2.2. Hypothesized Relationships of Protective Factors against Suicidal Ideation. Although four covariates are presented in one box for the purpose of clarity, they will be tested separately.





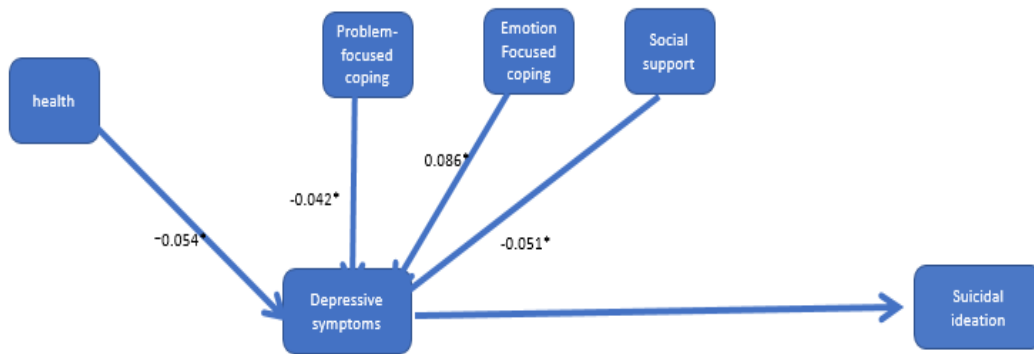
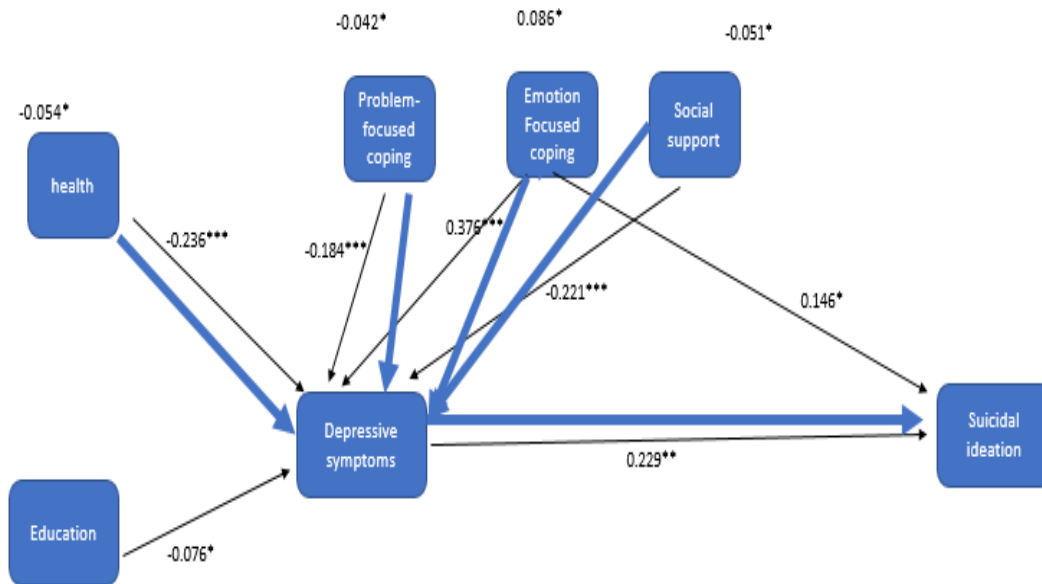
Note. Statistically significant arrow 
 Statistically nonsignificant arrow 
 $*p < .05$, $**p < .01$, $***p < .001$

Figure 2.3. Significant Paths of Direct Effects of Protective factors against Suicidal Ideation



* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 2.4. Significant Paths of Indirect Effects of Protective Factors against Suicidal Ideation as Mediated by Depressive Symptoms



Note. Statistically significant direct effect arrow \longrightarrow
 Statistically significant indirect effect arrow \longrightarrow
 $*p < .05$, $**p < .01$, $***p < .001$

Figure 2.5. Significant Paths of Direct and Indirect Effects of Protective Factors against Suicidal Ideation as Mediated by Depressive Symptoms

Table 2.1.
Missingness of The Sample

	<i>n</i>	<i>Mean</i>	<i>Std. Deviation</i>	Missing		No. of Extremes ^a	
				Count	Percent	Low	High
Social Support	470	16.3468	2.72807	5	1.1	10	0
Education	448	13.5201	2.13934	27	5.7	0	4
Income	444	63146.2297	92971.68482	31	6.5	0	38
Depressive Symptoms	475	18.2505	17.65380	0	.0	0	24
Problem-focused Coping	474	24.7300	4.48616	1	.2	3	0
Emotional-focused Coping	474	19.6160	4.13568	1	.2	0	7
Sex	475			0	.0		
Family Confidant	471			4	.8		
Friend Confidant	471			4	.8		
Suicidal Ideation	469			6	1.3		
Health	475			0	.0		

Table 2.2.
Demographic Characteristic and Study Variables (N = 475)

Variable	Frequency	Percentage	Mean (SD)	Range
Sex				
Female	379	79.8		
Male	96	20.2		
Health				
Poor	23	4.8		
Fair	39	8.2		
Good	132	27.8		
Very Good	188	39.6		
Excellent	93	19.6		
Education			13.50(2.09)	9.87
Income			63,146.23(92,971.68)	710,000.00
Family Confidant				
Yes	394	82.9		1
No	81	17.1		
Friend Confidant				
Yes	379	79.8		1
No	96	20.2		
Suicidal Ideation				
Yes	79	16.6		
No	396	83.4		
Social Support			16.34(2.72)	16
Problem-Focused Coping			24.78(4.42)	27
Emotion-Focused Coping			19.66(4.10)	28
Depressive Symptoms			18.25(17.65)	118

Note. Descriptive statistics are reported prior to correction for skewness and kurtosis of depressive symptoms and income variables.

Table 2.3.
Path Analysis of Direct Effects of Protective Factors on Depressive Symptoms (N = 475)

Parameter estimates	Unstandiarized(SE)	Standarized(SE)
Sex → Depressive symptoms	-0.039 (0.039)	-0.034 (0.034)
Health → Depressive symptoms	-0.101 (0.016) ***	-0.236(0.036) ***
Education→ Depressive symptoms	-0.016(0.008) *	-0.076(0.036) *
Having a family confidant→ Depressive symptoms	-0.092(0.050)	-0.079 (0.043)
Having a friend confidant→ Depressive symptoms	-0.046(0.054)	-0.043(0.049)
Social support → Depressive symptoms	-0.036(0.007) ***	-0.221(0.046) ***
Problem-focused coping→ Depressive symptoms	-0.018(0.004) ***	-0.184(0.042) ***
Emotion-focused coping→ Depressive symptoms	0.040(0.005) ***	0.376(0.044) ***

Note. Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2.4.
Path Analysis of Direct Effects Of Protective Factors on Suicidal Ideation (N = 475)

Parameter estimates	Unstandiarized (SE)	Standarized (SE)
Sex → Suicidal ideation	-0.344(0.201)	-0.129(0.074)
Health → Suicidal ideation	0.086(0.071)	0.085(0.070)
Education→ Suicidal ideation	0.022(0.033)	0.044(0.066)
Having a family confidant→ Suicidal ideation	0.029(0.212)	0.010(0.075)
Having a friend confidant→ Suicidal ideation	0.187(0.204)	0.073(0.077)
Social support → Suicidal ideation	0.011(0.031)	0.030(0.079)
Problem-focused coping→ Suicidal ideation	-0.003(0.016)	-0.012(0.069)
Emotion-focused coping→ Suicidal ideation	0.037(0.019) *	0.146(0.070) *
Depressive symptoms→Suicidal ideation	0.540(0.203) **	0.229(0.085) **

Note. Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2.5.
Path Analysis of The Indirect Impact of Each Protective Factor on Suicidal Ideation As Mediated By Depressive Symptoms (N = 475)

Parameter estimates	Estimate	95% CI
Support→Depressive symptoms→SI	-0.051	[-0.092, -0.009]
P_coping→Depressive symptoms→SI	-0.042	[-0.079, -0.005]
E_coping→Depressive symptoms→SI	0.086	[0.019, 0.153]
Health→Depressive symptoms→SI	-0.054	[-0.096, -0.012]
FAMILY to SI	-0.018	[-0.043, 0.007]
FRIEND to SI	-0.010	[-0.034, 0.015]
SEX to SI	-0.008	[-0.026, 0.010]
EDU to SI	-0.017	[-0.038, 0.003]

Note. CI = confidence interval. Significant indirect effects (i.e., those whose confidence interval excludes zero) appear in bold. SI=suicidal ideation, P_coping=problem-focused coping, E_coping=emotion-focused coping

Chapter III

The Impact of Spousal Physical Abuse on Suicidal Ideation

Among Community-Dwelling Older Adults:

Moderating Effects of Protective Factors

Chapter 3, in full is currently being prepared for submission for publication of the material.

Authors: Sukyung Yoon and dissertation committee members. The dissertation author was the primary investigator and author of this paper.

Abstract

Purpose of the Study: The purpose of this study is to examine the impact of having experienced spousal physical abuse on suicidal ideation and the possible moderating effects of various coping styles, social support, and having confidants on the relationship between depressive symptoms and suicidal ideation among community-dwelling older adults.

Methods: Data from the Wisconsin Longitudinal Study (WLS) was used. A path analysis using M-plus 8.0 was conducted to fit the path model and examine the impact of spousal/partner physical abuse on suicidal ideation and testing on the possible moderating effects of protective factors on the relationship between depressive symptoms and suicidal ideation.

Results: First, the experience of spouse/partner physical abuse has a significant impact on both depressive symptoms and suicidal ideation. Second, problem-focused coping, social support, and having a family confidant have a significant direct impact on depressive symptoms and indirect effects on suicidal ideation mediated by depressive symptoms whereas emotional-focused coping has both a direct and indirect positive impact on not only depressive symptoms but also suicidal ideation. Third, although the practical significance may be small, emotional-focused coping worked as a moderator between depressive symptoms and suicidal ideation.

Implication: Interventions to increase protective factors against depressive symptoms and suicidal ideation, and regular screening tests of IPV, depressive symptoms and suicidal ideation are important among community-dwelling older adults.

Keywords: suicidal ideation, depressive symptoms, protective factors, direct and indirect effects, moderating effects, community-dwelling older adults, spouse/partner physical abuse

Introduction

Intimate partner violence (IPV) is a critical concern around the world (Organization, 2013). In the US, over 13,000 older females aged 55 and above are victims of nonlethal abuse by their intimate partners every year (Rennison & Rand, 2003), and researchers expect IPV in later life to surge as baby boomers become older (Roberto, McPherson, & Brossoie, 2013). IPV severely affects the mental and physical health of victims (Campbell, 2002; Carbone-López et al., 2006). Although depression, posttraumatic stress, and suicidal ideation are major issues for both men and women who experienced IPV (Devries et al., 2013; Golding, 1999; Romito & Grassi, 2007), a typical symptom for female victims of IPV is depression (Forte et al., 2005). These women have a high likelihood of depression in the future, whether or not the IPV persists (Chuang et al., 2012), and it may cause victims to have suicidal thought or attempts (Devries et al., 2013; Golding, 1999; Kramer et al., 2004; Romito & Grassi, 2007; Thompson et al., 2002). Research using data from eight countries has shown that spousal physical abuse during a person's lifetime is strongly related to suicidal thought (Organization, 2002). Although depression is a harbinger of suicidal thought and suicide in later life (Alexopoulos et al., 1999; Conwell, 1997; Gottfries, 2001; Lange, 2003; Waern et al., 2003), not all depressed older adults have suicidal thought (I. Lee, 2011; McLaren et al., 2007). Some factors may protect them against suicidal ideation (I. Lee, 2011). Thus, identifying the factors that protect against suicidal ideation may ameliorate or prevent suicidal thought even if depressive symptoms are present.

Most research on IPV has tended to focus on risk factors, comprehensive intimate partner violence, or general domestic violence rather than protective factors of physical abuse from a spouse or partner (Afifi et al., 2009; Bonomi et al., 2006; Brandl & Meuer, 2000; Chan, 2011; Cho, 2012; Coker, Davis, et al., 2002; Coker et al., 2005; Devries et al., 2013; Seaver, 1997;

Zlotnick et al., 2006). Although some research has examined the influence of protective factors on depressive symptoms on or suicidal thought (J. Y. Bae et al., 2005; Chun & Ahn, 2011; Connidis & Davies, 1992; Craparo et al., 2014; Eom, 2007; Marty et al., 2010). limited research has investigated the impact of spousal/partner physical abuse on suicidal ideation among older adults. In addition, little research has examined possible protective factors against depressive symptoms and suicidal ideation, while simultaneously examining possible moderating effects of various protective factors on the relationship between depressive symptoms and suicidal ideation, in an older adult population. Another gap is that little research has investigated direct and moderating effects of both general social support such as that from friends/neighbors, social support from confidants, and coping strategies simultaneously on the relationship between depressive symptoms and suicidal ideation in a population of community-dwelling older adults.

The purpose of this study is to examine the impact of having experienced spousal physical abuse on suicidal ideation, with a focus on the possible moderating effects of various coping styles, social support, and having confidants on the relationship between depressive symptoms and suicidal ideation in a sample of community-dwelling older adults.

Protective Factors against Suicidal Ideation

Coping. According to Lazarus and Folkman (1980), coping involves both cognition and behaviors (Folkman & Lazarus, 1980; Piazza, Floyd, Mailick, & Greenberg, 2014). Studies have indicated that suitable coping skills may help older adults maintain healthy ties. However, unsuitable coping skills may have severe results (Piazza et al., 2014). The most typical categories of coping are problem-focused and emotion-focused coping (Compas et al., 2001). Problem-focused coping, which includes resolving issues actively and directly, may be a suitable skill that leads to better results (Piazza et al., 2014). In contrast, emotion-focused coping

involves mostly passive skills such as avoidance of stressors, which is a less effective way to avoid stressors (Piazza et al., 2014). Research has investigated how appropriate coping strategies such as problem-focused coping function as protective factors that directly and indirectly safeguard against depression and suicidal ideation for at-risk populations such as abused older adults (Bang, 2014; Jeong & Kim, 2014; J. H. Jeong & J. S. Kim, 2015; MY Lee & Nam, 2007; Marty et al., 2010). Problem-focused coping strategies have been shown to negatively mediate between stress and suicidal ideation (MY Lee & Nam, 2007; Y. Song et al., 2013). In contrast, researchers have found that among older adults with depression, emotion-focused coping skills such as avoidance and suppression intensify suicidal thought (Lynch et al., 2004). Emotion-focused coping such as self-blame has also been associated with suicidal thoughts and depression (Horwitz et al., 2011) and even intensifies suicidal thoughts by increasing the degree of depression (Wang et al., 2012). Effective and appropriate coping such as problem-focused coping skills may be a critical individual-level protective factor against depressive symptoms and suicidal ideation among older adults as it influences the link between depressive symptoms and suicidal ideation (Horwitz et al., 2011; Lynch et al., 2004).

Having a Confidant. The degree of closeness a person has with a particular individual may provide more influential social support than the number of networks in which the person is involved (I. J. Lee, 2009; Y. E. Oh et al., 2014). Confidants are people with whom individuals have reliable and close relationships (J. Y. Bae et al., 2005; Lincoln et al., 2012) and with whom the person can share their deepest feelings and troubles (Connidis & Davies, 1990, 1992). Having confidants may reinforce people's inner strengths, such as self-esteem and belongingness, to help overcome suicidal thoughts (Dunér & Nordström, 2007; Lincoln et al., 2012). Studies have found that having a confidant is also associated with better physical and

mental health consequences in vulnerable situations such as bereavement and illnesses (Bookwala et al., 2014; McPherson et al., 2006; Newton et al., 2008). Older adults who have confidants are less likely to commit suicide (Conwell et al., 2011). However, few studies have investigated the impact of having a family confidant and a friend confidant on both depressive symptoms and suicidal ideation simultaneously.

Social Support from Friends or Neighbors. Social support from friends and neighbors may be a vital protective factor against depressive symptoms and suicidal ideation among community-dwelling older adults. (June et al., 2009; Rushing et al., 2013; I. Seo & Ko, 2011). Social support from friends or neighbors has been shown to be an important protective factor against various challenging psychological and physical situations (Ai et al., 2015; Edelstein et al., 2009a; S.-H. Lee et al., 2014; Rowe et al., 2006). Moreover, the number of elderly people living alone has increased sharply due to family discord, divorce, or spousal death (I. Lee, 2011; Y. D. Song et al., 2010). This is a serious concern since a lower sense of belongingness is associated with depressive symptoms and suicidal ideation among older adults (Bailey & McLaren, 2005). Social support from friends or neighbors may be a significant protective factor against suicidal ideation caused by depression, one of the most critical risk factors of suicidal ideation (Corna et al., 2010; I. Lee, 2011).

Theoretical Framework

The present research was conducted within the context of the stress process model (SPM) (Pearlin et al., 1981). The SPM describes stressors, stress mediators and/or moderators, and stress consequences in a linked process (Pearlin, 1989). Social support and coping have usually been employed as mediating variables in the model (Kong & Moorman, 2013; Pearlin et al., 1990). As shown in Figure 2.1, the SPM has established interconnections between stressors

and psychological stress consequences with mediating coping and social support. The SPM has also been used to examine the moderating effects of coping and social support between stresses and the outcomes (Pearlin, 1989; Pearlin et al., 1981).

Based on the SPM, this research investigated the impact on suicidal ideation of having experienced spousal physical abuse. Additionally, the present study focuses on the moderating effects of protective factors (e.g., coping, social support and confidant relationships) between depression symptoms and suicidal ideation. In particular, this study seeks to give theoretical and empirical direction in related fields by extending our understanding of the influence of the experience of spousal physical abuse and the influence of coping strategies, social support, and having confidants as protective factors against depressive symptoms and suicidal ideation among community-dwelling older adults.

The Research Question and Hypotheses

This study has the following research question: Does the experience of spousal/partner physical abuse impact suicidal ideation in community-dwelling older adults? Specifically, the focus is on the moderating effects of protective factors between depressive symptoms and suicidal ideation.

This study has the following research hypotheses, as shown Figure 2:

1. The experience of spousal/partner physical abuse will have an impact on depressive symptoms and suicidal ideation
2. Each protective factor will have an impact on depressive symptoms and suicidal ideation directly.
3. Each protective factor will moderate the relationship between depressive symptoms and suicidal ideation.

Method

Participants

Data from the Wisconsin Longitudinal Study (WLS) was since it comes from a longitudinal population-based random sample survey of 10,317 men and women who graduated from Wisconsin high schools in 1957; and 5,823 of their siblings who were randomly selected and included in the sample. The survey on which the WLS is based included five waves of interviews at regular intervals in 1957, 1975, 1993, 2004, and 2011 by telephone and mailed questionnaires. In the 2004 wave, 6,845 graduates participated in the telephone survey and responded to mailed questionnaires. The present research used data from the 2004 wave when the participants were 64 to 65 years of age (Easton & Kong, 2017; Hauser & Roan, 2006; Kong & Moorman, 2013). The WLS offers considerable information related to individual, familial, and social variables, including suicidal thoughts. Although other data sets, such as the Midlife in the United States (MIDUS) and The Health and Retirement Study (HRS), may provide information on individual, familial, and social variables, they do not offer variables related to suicidality. Other data sets such as Collaborative Psychiatric Epidemiology Surveys (CPES) offer various suicidality measures, but they are more likely to focus on psychopathology or less likely to target fewer individual-related factors. The 2004 wave of the WLS, unlike the 2011 wave, provides both a depressive symptom measure, which provides a continuous variable of twenty specific items, and a suicidal ideation variable. Therefore, a decision was made to use the 2004 wave for the present study. The current research sample included respondents who completed the survey both by phone and by mail.

Measurement

Physical Abuse from A Spouse or Romantic Partner. One independent variable in this study is respondents' answers to a question concerning their history of being physically abused by a spouse or romantic partner. Older adults were asked the binary response question, "Has your spouse or romantic partner ever treated you in a way that some would think of as physical abuse?" Answers were converted into a dummy variable: yes (1) and no (0).

Depressive Symptoms. Depressive symptoms were assessed with a scale from the Center for Epidemiologic Studies – Depression Scales (CES-D) (Radloff, 1977). This scale has been widely used to assess depression among older adults (Haringsma et al., 2004). Research also has shown that people with current depression have an increased possibility of lifetime depression (Kroenke et al., 2009). Depression symptoms were measured in the WLS by using the CES-D by having the participants report the number of days in the past week (0-7 days) that they experienced each of twenty depression symptoms. The participants' responses were summed to create a total score ranging from 0 to 140, with higher scores indicating higher levels of depressive symptoms. We used the mean of the square root of depressive symptoms due to kurtosis and skewness. Only respondents who answered 17 or more of the 20 items of the depressive symptoms scale were included in this study (Radloff, 1977). The Cronbach's alpha is .86 in this study.

Coping. Coping was assessed using questions based on the Brief Coping (Carver, 1997), a variation of the Coping Orientations to Problems Experienced (COPE) scale (Carver et al., 1989). Respondents answered questions about how they normally coped with stress, using a four-point Likert scale with response options ranging from 1: "I usually do not do this at all", to 4: "I usually do this a lot." According to the COPE scale (Carver et al., 1989) and the Brief Coping

scale (Carver, 1997), problem-focused coping is measured by eight questions ($\alpha = .83$) and emotion-focused coping is measured by ten questions ($\alpha = .68$). The Cronbach's alpha for the emotion-focused coping scale was slightly less than .70

Problem-focused coping involves active coping, planning, positive-reframing, and acceptance, whereas emotion-focused coping involves self-distraction, behavior disengagement, denial, self-blame, and venting (Carver, 1997). Active coping was identified by two items: "I concentrate my efforts on doing something about the situation I'm in" and "I take action to try to make the situation better." Planning coping was identified by "I try to come up with a strategy about what to do" and "I think hard about what steps to take." Positive-reframing was identified by "I try to see it in a different light, to make it seem more positive" and "I look for something good in what is happening." Acceptance was shown by "I accept the reality of the fact that it has happened" and "I learn to live with it."

Self-distraction was identified by two items: "I turn to work or other activities to take my mind off things" and "I do something to think about it less, such as going to the movies, watching TV, reading, daydreaming, sleeping or shopping." Behavior disengagement was identified by "I give up trying to deal with it" and "I give up the attempt to cope." Denial was identified by the items, "I say to myself this isn't real", and "I refuse to believe that it has happened." Self-blame was identified by "I criticize myself", and "I blame myself for things that happened"; and venting by, "I say things to let my unpleasant feelings escape", and "I express my negative feelings."

Social Support. Social support was assessed by four questions that were summed after transforming negative questions into reversed coding. The Cronbach's alpha of this study is .56 using a four-question scale with negative and positive questions. The Cronbach's alpha

level is low, because unidimensional scales and many questions have high alpha levels (Cortina, 1993). This social support scale, including both negative and positive questions, has been extensively used in published articles (Ha, 2009; Kong & Moorman, 2013). The four-question scale includes the following questions about friends and relatives other than their spouse or children: “How much do they make you feel loved and cared for?”; “How much do they make too many demands on you?”; “How much are they willing to listen to you when you need to talk about your worries or problems?”; and “How much are they critical of what you do?” All of the questions were assessed employing a five-point Likert scale from 1: “not at all”, to 5: “a lot.” The total scores ranged from 4 to 20 with higher scores indicating higher levels of social support.

Confiding Relationships Among Family Members. Confiding relationships among family members were assessed with a binary question: “Is there a person in your family with whom you can really share your very private feelings and concerns?” Answers were converted into a dummy variable: yes (1) and no (0).

Confiding Relationships Among Friends. Confiding relationships among friends were assessed with a binary question: “Is there a friend outside your family with whom you can really share your very private feelings and concerns?” Answers were converted into a dummy variable: yes (1) and no (0).

Suicidal Ideation. Suicidal ideation (SI) was assessed with a binary question: “Have you ever seriously thought about taking your own life?” Answers were converted into a dummy variable: yes (1) and no (0).

Covariates.

Current perceived health. Current perceived health status is strongly associated with depressive symptoms and suicidal ideation among community-dwelling older adults (M Lee,

2012; J.-S. Park & Kim, 2014; Yang & Moon, 2012). In addition, subjective perceived physical health is highly related to suicidal ideation controlling for demographic variables and depression; however, depression may moderate the association between physical health and suicidal ideation (SH Kim & Choi, 2007). Older adults with high perceived health were less likely to have suicidal thoughts (B Park & Song, 2014; Yang & Moon, 2012). It was assessed by a five-point Likert scale from poor (1) to excellent (5).

Economic status. Economic status is related to depressive symptoms and suicidal ideation among community-dwelling older adults. Individuals with higher economic status are less likely to have suicidal thoughts (K. Kim et al., 2011; MH Kim & Kim, 2011; Y. E. Oh et al., 2014; H. Seo & Jung, 2010). Economic status has a more powerful influence on suicidal thoughts for older men than for older women (Y. E. Oh et al., 2014; Yang & Moon, 2012). It was assessed by annual total income. The square root of the income variable was employed because of high kurtosis and skewness of the variable (Tabachnick & Fidell, 2008)

Education. Older adults with higher education are less likely to have depressive symptoms and suicidal thoughts (M Lee, 2012; B Park & Song, 2014; H.-S. Park & Park, 2015). It was assessed by years of education.

Gender. Depression, posttraumatic stress, and suicidal ideation are major symptoms for both male and female victims of IPV (Devries et al., 2013; Golding, 1999; Romito & Grassi, 2007). In addition, researchers have reported that there are gender differences in depressive symptoms, coping skills, relationships with family members, social support, and suicidal thoughts (Lapierre et al., 2011; McLaren et al., 2015). Gender was measured with a binary question and responses coded as male (1) and female (0).

Data Analysis

A path analysis was conducted to fit the model and examine the impact of IPV on suicidal ideation, with a special focus on the possible moderating effects of protective factors on the relationship between depressive symptoms and suicidal ideation. Because the dependent variable in the present research was binary, a weighted least squares parameter estimation (WLSMV) method was employed (Honjo et al., 2006; Muthén & Muthen, 2017). To create the five interaction terms, categorical variables were changed to dummy variables (0-no and 1- yes), and interaction terms were centered to avoid multicollinearity. The fit of the hypothesized path model was assessed employing the chi square value (χ^2), the comparative fit Index (CFI), the root mean square error of approximation (RMSEA), and the weighted root mean square residual (WRMR) (West et al., 2012). The path model was fit to the data using Mplus version 8.0. Given the likely violation of the multivariate normality assumption, 95% confidence intervals were estimated using bootstrapping (a bootstrap sample of 1,000 was specified). This study used data only from respondents who answered both the phone and mail surveys completely.

Results

Missing Data

Missing data were identified by analyzing the patterns of missing values using SPSS 25. The total missing values in this sample were under 2% for all variables in the sample (Table 3.1). The missing value patterns were random throughout the results. Maximum likelihood estimation, one of the recommended methods for practically fitting “any missing data pattern” (Enders, 2010, p. 5) was used to impute missing values. Imputed missing values for binary variables were rounded to the nearest integer. Table 1 shows sample characteristics for missingness in this sample.

Descriptive Statistics

Table 3.2 presents the descriptive statistics of key variables. The sample included 54% female (54%, $n = 3,310$), and 46% male (46%, $n = 2,815$). As for self-perceived health status, 38.6% of the sample responded that they were in “very good” health (38.6%, $n = 2,364$); 26.9% of the sample perceived they were in “good” health (26.9%, $n = 1,646$); nearly 25.4% said they were in “excellent” health (25.4%, $n = 1,557$); 7% said “fair” health (7%, $n = 430$); and 2.1% said “poor” health (2.1%, $n = 128$). The mean education level was over 13 years ($M = 13.72$, $SD = 2.32$). The mean income (total household income per year) was \$ 66,584 per year ($SD = 82,556.88$). Over 87.8% of the sample had a family confidant (87.8%, $n = 5,380$), and about 74% of the sample had a friend confidant (73.9%, $n = 4,524$). The mean social support score was 16.40 ($SD = 2.41$), the mean problem-focused coping score was 24.19 ($SD = 4.65$), the mean emotion-focused coping score was 18.33 ($SD = 4.03$), and the mean of depressive symptoms score was 13.64 ($SD = 13.93$). About 5% of the sample reported that they had experienced suicidal ideation in their life (5%, $n = 308$). In the path analysis the square root of the income and depressive symptoms variables were used due to high kurtosis and skewness.

Results of Hypothesis Testing

The initial research path model included marital status as a covariate. However, marital status was excluded from the path model due to unequal sample sizes (with the smallest sample size having a ratio greater than 4 to 1). Then the research path model was estimated. Tables 3.3, 3.4, and 3.5, and Figures 2.1(Pearlin & Bierman, 2013), 3.1, 3.2, 3.3, 3.4, 3.5, and 3.6 show the results for the impact of spouse/partner physical abuse on suicidal ideation focusing on moderating effects of protective factors among community-dwelling older adults. Overall, the final model fit indices were CFI= 0.932, RMSEA = 0.057, 90% CI [0.054, 0.060], WRMR =

3.303, $X^2(57) = 1195.476$, $p < 0.001$. These results suggested an acceptable fit (Marsh et al., 2004; West et al., 2012).

Hypothesis Testing

Hypothesis 1 stated: The experience of spousal/partner physical abuse will impact depressive symptoms and suicidal ideation. The results revealed that the experience of spouse/partner physical abuse has a significantly direct impact on both depressive symptoms ($\beta = 0.054$, $S.E = 0.011$, $p < 0.001$, 95% CI [0.032, 0.076] and suicidal ideation ($\beta = 0.163$, $S.E = 0.020$, $p < 0.001$, 95% CI [0.123, 0.203]). These data supported Hypothesis 1.

Hypothesis 2 stated: Each protective factor will have a direct impact on depressive symptoms and suicidal ideation. Problem-focused coping ($\beta = -0.174$, $S.E = 0.012$, $p < 0.001$, 95% CI [-0.197, -0.150]), social support ($\beta = -0.272$, $S.E = 0.013$, $p < 0.001$, 95% CI [-0.297, -0.246]) and having a family confidant ($\beta = -0.414$, $S.E = 0.143$, $p < 0.01$, 95% CI [-0.695, -0.133]) had a significant negative impact on depressive symptoms. Emotion-focused coping had a positive impact on depressive symptoms ($\beta = 0.266$, $S.E = 0.013$, $p < 0.001$, 95% CI [0.242, 0.291]). However, having a friend confidant did not have a statistically significant relationship with depressive symptoms. Emotion-focused coping had a positive impact on suicidal ideation ($\beta = 0.136$, $S.E = 0.024$, $p < 0.001$, 95% CI [0.089, 0.182]). Having a family confidant had a statistically nonsignificant relationship with suicidal ideation, ($\beta = -0.043$, $S.E = 0.023$, $p = 0.0631$, 95% CI [-0.087, 0.002]).

The indirect effects of protective factors on suicidal ideation all significantly impacted suicidal ideation by way of mediating effects through depressive symptoms: social support ($\beta = -0.062$, $S.E = 0.009$, $p < 0.001$, 95% CI [-0.080, -0.044]), problem-focused coping ($\beta = -0.040$, $S.E = 0.006$, $p < 0.001$, 95% CI [-0.052, -0.028]), having a family confidant ($\beta = -0.094$, $S.E =$

0.035, $p < 0.01$, 95% CI [-0.164, -0.025]) and emotion-focused coping ($\beta = 0.061$, $S.E = 0.009$, $p < 0.001$, 95% CI [0.044, 0.078]). In addition, health status ($\beta = -0.055$, $S.E = 0.008$, $p < 0.001$, 95% CI [-0.071, -0.040]), sex ($\beta = -0.036$, $S.E = 0.006$, $p < 0.001$, 95% CI [-0.047, -0.025]), income ($\beta = -0.009$, $S.E = 0.003$, $p < 0.01$, 95% CI [-0.015, -0.003]) and experience of spousal physical abuse ($\beta = 0.012$, $S.E = 0.003$, $p < 0.001$, 95% CI [0.006, 0.018]) significantly impacted suicidal ideation through the mediating variable depressive symptoms. These results partially supported Hypothesis 2.

Hypothesis 3 stated: Each protective factor will moderate the relationship between depressive symptoms and suicidal ideation. Older adults with higher emotional-focused coping are more likely to have suicidal ideation among those with depressive symptoms. Although the practical significance may be small, emotion-focused coping had a moderating effect between depressive symptoms and suicidal ideation ($\beta = 0.042$, $S.E = 0.021$, $p < 0.05$, 95% CI [0.001, 0.083]). There was no moderating effect of problem-focused coping, social support, and having a family confidant between depressive symptoms and suicidal ideation. These data partially supported Hypothesis 3.

Discussion

This study is the first attempt to examine the impact of community-dwelling older adults who experienced spousal physical abuse on suicidal ideation focusing on the moderating effects of various protective factors, including coping styles, social support, and having confidants between depressive symptoms and suicidal ideation. This topic is crucial because researchers expect that IPV in later life will increase as more baby boomers age (Roberto, Brossoie, McPherson, Pulsifer, & Brown, 2013; Roberto, McPherson, et al., 2013).

The first key finding is that the experience of spousal/partner physical abuse has an impact on depressive symptoms and suicidal ideation. This result supports the stress process model that stressors such as experiencing spouse/partner physical abuse is related to psychological distress (Pearlin, 1989). The current research contributes to the SPM literature indicating that spousal/partner physical abuse is a stressor in depressive symptoms that could lead to suicidal ideation among community-dwelling older adults. In addition, this study extended SPM by investigating the impact of protective factors on depressive symptoms and on suicidal ideation both directly and indirectly among this population.

Moreover, this research reveals three vital findings. First, as expected, the experience of spouse/partner physical abuse has a significant impact on both depressive symptoms and suicidal ideation. Second, problem-focused coping, social support, and having a family confidant have a significant direct impact on depressive symptoms and indirect effects on suicidal ideation mediated by depressive symptoms whereas emotional-focused coping has both a direct and indirect positive impact on not only depressive symptoms but also suicidal ideation. Third, although the practical significance may be small, emotional-focused coping worked as a moderator between depressive symptoms and suicidal ideation.

Potential Limitations

The WLS data consist of over 80% Caucasians from Wisconsin who have at least a high school diploma (Herd et al., 2014), thus limiting the generalizability of the results. Research including various racial and ethnic groups and different education levels may provide a deeper understanding of the topic (Chun & Ahn, 2011). In addition, all survey respondents were in their sixties when they responded. Results may be different for oldest older adults who are in their eighties or above (I. Lee, 2011; I. J. Lee, 2009; Roberto, McPherson, et al., 2013). Furthermore,

the life time experience of spousal/partner physical abuse and suicidal thoughts are binary questions. For a more accurate investigation and to avoid recall bias for these variables, using more advanced measurements is necessary. Lastly, conducting qualitative and longitudinal studies may offer a deeper understanding about this population and these issues.

Implications for Practitioners

This study revealed how spouse/partner physical abuse have an impact on depressive symptoms and SI among community-dwelling older adults even though there may be no current abuse. In addition, protective factors such as social support, problem-focused coping, and having a family confidant significantly influenced depressive symptoms. The results of this study reveal that emotional coping strategies directly impacted depressive symptoms and SI and moderated between depressive symptoms and SI although the practical significance is small. Given the results that depressive symptoms are the most powerful factor leading to SI, strengthening protective factors such as social support, having a family confidant, and problem-focused coping may lead depressive symptoms to decrease. It may be practical and crucial strategies to reduce and prevent SI. As practitioners, screening for both protective factors and risk factors is needed among older populations. Developing client-oriented programs and services both to boost the protective factors and to decrease risk factors are necessary.

The number of older adults who live alone with no family confidant has been increasing. Thus, it is imperative to boost community-based safety nets. We should develop programs that train healthy older adult volunteers to work with other more vulnerable older adults who may be in danger of domestic violence, elder abuse, depressive symptoms and SI in later life. These volunteers can collaborate with social workers, conducting home-visits and tele-checking for marginalized older adults living in the community. In addition, it may be helpful to recruit, train

and organize gate keepers -individuals within the community who can identify and reach out to older adults at risk of depressive symptoms or SI or elder abuse. Outreach programs by welfare agencies or religious affiliates are also necessary for older adults with functional limitations that hinder their social engagement.

The results also showed that emotional-coping skills are not only a risk factor of depressive symptoms but also of SI, directly and indirectly. It is imperative for practitioners let both older adults and their family members to learn effective communication skills and appropriate coping abilities. In addition, research shows that people with interpersonal traumatic experiences have issues in relationships with others, regarding affection, impulses and self-image, that may hinder cultivating appropriate and sound relationships (Van der Kolk et al., 2005). Therefore, it is necessary for practitioners to gain a deep and accurate understanding and seek interventions for this older population, so that they can may help the older populations and family members gain knowledge and learn about resources to reduce or stop the vicious cycle of ever worsening relationships (Roberto, Brossoie, et al., 2013; Roberto, McPherson, et al., 2013).

Recommendations for Future Research

Although victims of IPV are generally women, studies have also reported male victims (Romito & Grassi, 2007). Little research has investigated gender differences among older people who have experienced IPV. There may be different impacts of protective factors by gender, so it would be helpful for practitioners and policymakers to find variances for effective interventions. In addition, future research investigating age as a moderator among older populations such as oldest old and young old generations may lead to a deeper understanding of protective factors for each group (Ahn, 2012; I. Lee, 2011; I. J. Lee, 2009). Research has also shown that domestic violence in later life tends to change over from physical abuse to emotional abuse (Band-

Winterstein & Eisikovits, 2009; Roberto, McPherson, et al., 2013). Thus, more research is needed to study not only physical abuse but also emotional abuse to prevent intimate partner violence. Lastly, longitudinal studies may more precisely reveal a cumulative impact of IPV on mental health among older adults over the life-span and lead to a deeper understanding of the influence of protective factors.

Conclusion

This research reveals three vital findings. First, as expected, the experience of spouse/partner physical abuse has a significant impact on both depressive symptoms and suicidal ideation. Second, problem-focused coping, social support, and having a family confidant have a significant direct impact on depressive symptoms and indirect effects on suicidal ideation mediated by depressive symptoms whereas emotional-focused coping has both a direct and indirect positive impact on not only depressive symptoms but also suicidal ideation. Third, although the practical significance may be small, emotional-focused coping worked as a moderator between depressive symptoms and suicidal ideation.

The current research contributes to the SPM literature indicating that spousal/partner physical abuse is a stressor in depressive symptoms that could lead to suicidal ideation among community-dwelling older adults. In addition, this study extended SPM by investigating the impact of protective factors on depressive symptoms and on suicidal ideation both directly and indirectly among this population. In addition, this study looked into moderating effects of protective factors between depressive symptoms and suicidal ideation.

Interventions to increase protective factors to decrease risk factors are important. In addition, screening experience of IPV, depressive symptoms and suicidal ideation among older adults is critical.

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Appendices

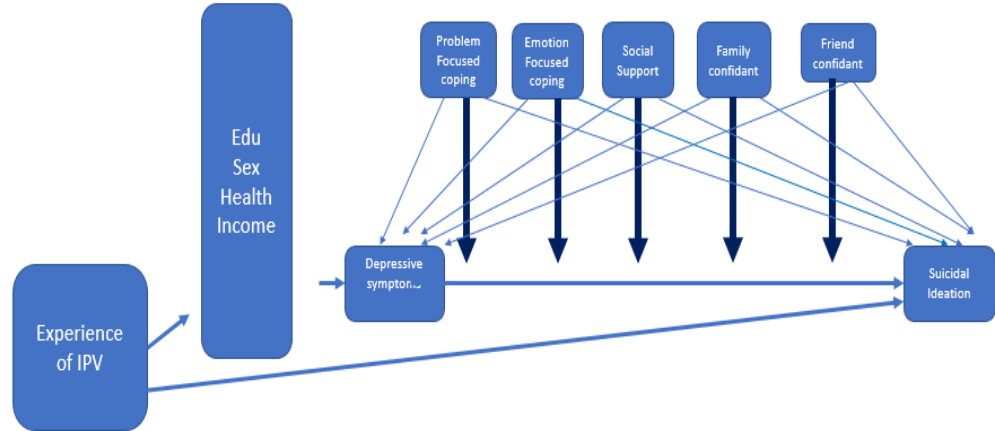


Figure 3.1. Hypothesized Moderating Effects. Although four covariates are presented in one box for the purpose of clarity, they will be tested separately.

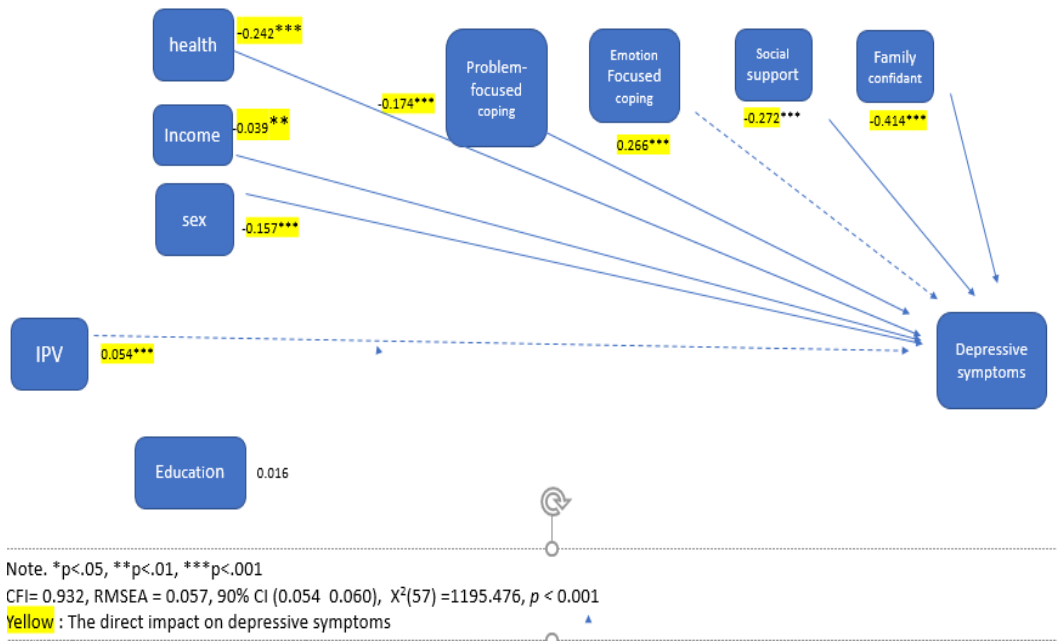
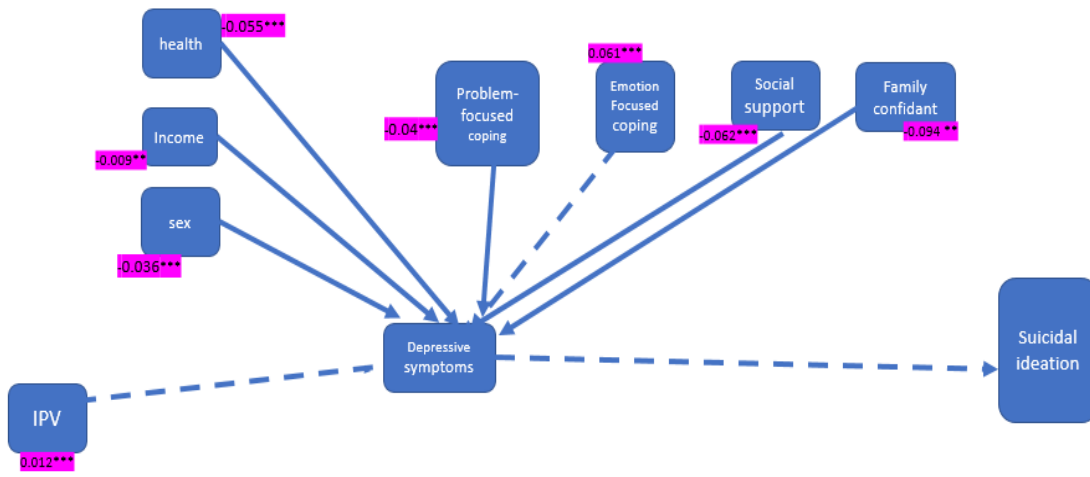


Figure 3.2. The Impact of Experience of Spousal Physical Abuse on Depressive Symptoms: Focusing on Direct Effects of Protective Factors

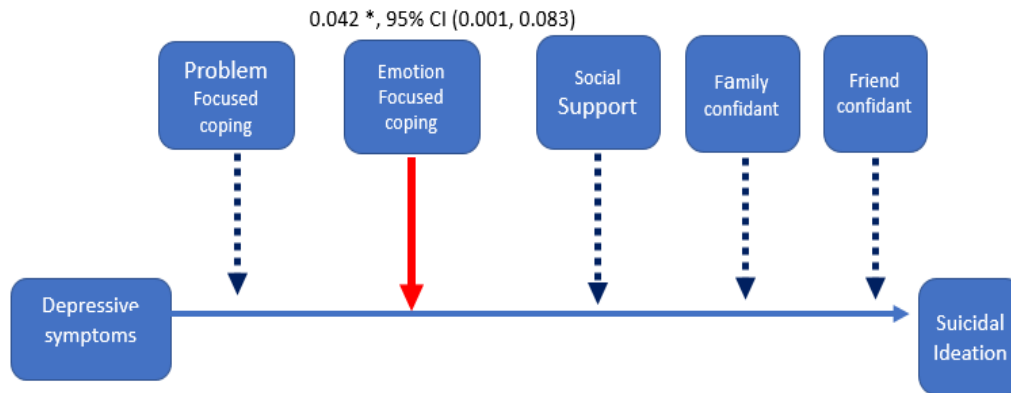


Note. *p<.05, **p<.01, ***p<.001

CFI= 0.932, RMSEA = 0.057, 90% CI (0.054 0.060), $X^2(57) = 1195.476, p < 0.001$

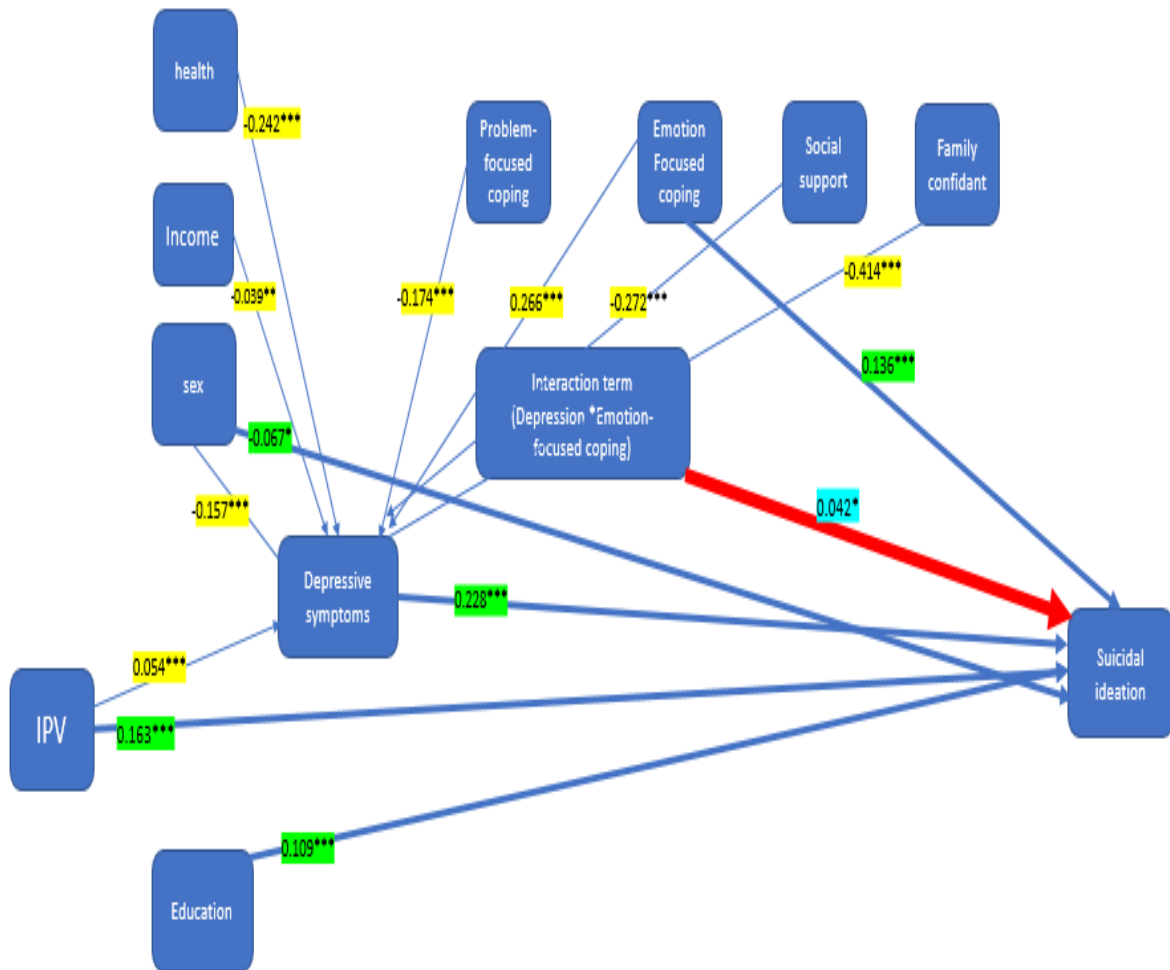
Pink: Indirect effect on SI Positive effect \dashrightarrow Negative effect (Protective Factor) \longrightarrow

Figure 3.3. The Impact of Experience of Spousal Physical Abuse on Suicidal Ideation: Focusing on Indirect Effects of Protective Factors



Note. * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 3.4. Moderating Effects of Protective Factors Between Depressive Symptoms and Suicidal Ideation



Note. * $p < .05$, ** $p < .01$, *** $p < .001$

CFI= 0.932, RMSEA = 0.057, 90% CI (0.054 0.060), $\chi^2(57) = 1195.476$, $p < 0.001$

Yellow : The impact on depressive symptoms, Green: The impact on Suicidal Ideation, Blue: Moderating effect

Figure 3.5. The Impact of Spousal Physical Abuse Experience on Suicidal Ideation: Focusing on Moderating Effects

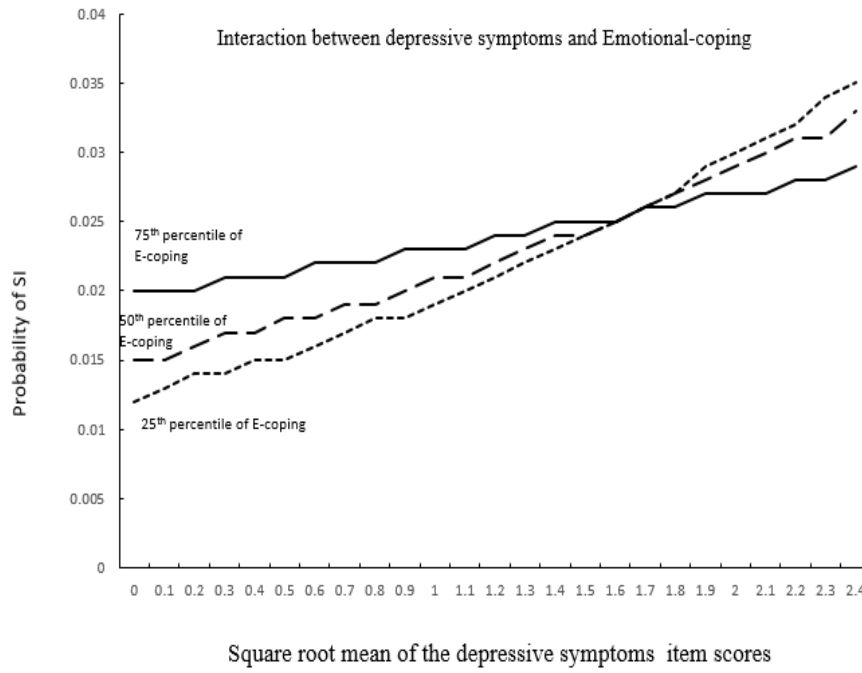


Figure 3.6. Interaction Between Emotional Focused Coping and Depressive Symptoms

Table 3.1.
Missingness of The Sample (N=6,125)

Variable	N	Mean	Std. Deviation	Missing	
				Count	Percent
Income	6125	224.7893	126.71622	0	.0
Depressive Symptoms	6125	.7178	.41300	0	.0
Health	6123	3.7826	.97198	2	.0
Education	6124	13.7165	2.31773	1	.0
Social Support	6074	16.4070	2.41598	51	.8
Emotion-focused coping	6045	18.3318	4.05510	80	1.3
Problem-focused coping	6039	24.1898	4.67925	86	1.4
Suicidal Ideation	6013			112	1.8
Experience of Spousal Physical Abuse	5997			128	2.1
Sex	6125			0	.0
Friend confidant	6079			46	.8
Family confidant	6081			44	.7

Note. Mean of Depressive symptoms and income variables used squared root values.

Table 3.2.
Demographic Characteristic and Study Variables (N = 6,125)

Variable	Frequency	Percentage	Mean(SD)	Range
Sex				
Female	3,310	54.0		
Male	2,815	46.0		
Health				
Poor	128	2.1		
Fair	430	7.0		
Good	1,646	26.9		
Very Good	2,364	38.6		
Excellent	1,557	25.4		
Education			13.72(2.32)	8
Income			66,584.62(82,556.88)	710,000
Family Confidant				
Yes	5,380	87.8		
No	745	12.2		
Friend Confidant				
Yes	4,524	73.9		
No	1,601	26.1		
IPV				
Yes	440	7.2		
No	5,685	92.8		
Suicidal Ideation				
Yes	308	5.0		
No	5,817	95.0		
Social Support			16.40(2.41)	16
Problem-Focused Coping			24.19(4.65)	31
Emotion-Focused Coping			18.33(4.03)	39
Depression Symptoms			13.64(13.93)	112

Note. Descriptive statistics are reported prior to correction for skewness and kurtosis of depressive symptoms and income variables.

Table 3.3.**The Impact of Experience of Spousal Physical Abuse on Depressive Symptoms: Focusing on Direct Effects of Protective Factors (N = 6,125)**

Parameter estimates	Unstandiarized(SE)	Standarized(SE)
Sex → Depressive symptoms	-0.130 (0.010) ***	-0.157(0.012) ***
Health → Depressive symptoms	-0.103 (0.005) ***	-0.242(0.011) ***
Education→ Depressive symptoms	0.003 (0.002)	0.016(0.012)
Income → Depressive symptoms	0.000 (0.000) **	-0.039(0.012) **
Having a family confidant→ Depressive symptoms	-0.542(0.187) **	-0.414(0.143) **
Having a friend confidant→ Depressive symptoms	0.006(0.012)	0.006(0.013)
Social support → Depressive symptoms	-0.047(0.002) ***	-0.272(0.013) ***
Problem-focused coping→ Depressive symptoms	-0.015(0.001) ***	-0.174(0.012) ***
Emotion-focused coping→ Depressive symptoms	0.028(0.001) ***	0.266(0.013) ***
IPV → Depressive symptoms	0.086(0.018) ***	0.054(0.011) ***

Note. Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3.4.
The Impact of Experience of Spousal Physical Abuse on Suicidal Ideation: Focusing on Direct Effects of Protective Factors (N = 6,125)

Parameter estimates	Unstandiarized (<i>SE</i>)	Standardized (<i>SE</i>)
Sex → Suicidal ideation	-0.138(0.065) *	-0.067(0.031) *
Health → Suicidal ideation	-0.040(0.029)	-0.038(0.027)
Education → Suicidal ideation	0.048(0.013) ***	0.109(0.028) ***
Income → Suicidal ideation	0.000(0.000)	0.012(0.028)
Having a family confidant→ Suicidal ideation	-0.139(0.075)	-0.043(0.023)
Having a friend confidant→ Suicidal ideation	0.045(0.069)	0.019(0.029)
Social support → Suicidal ideation	-0.006(0.014)	-0.015(0.032)
Problem-focused coping→ Suicidal ideation	0.008(0.006)	0.036(0.028)
Emotion-focused coping→ Suicidal ideation	0.036(0.006) ***	0.136(0.024) ***
Spousal Physical Abuse → Suicidal ideation	0.652(0.082) ***	0.163(0.020) ***
Depressive symptoms →Suicidal ideation	0.570(0.077) ** *	0.228(0.031) ***

Note. Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3.5.
The Impact of Experience of Spousal Physical Abuse on Suicidal Ideation: Focusing on Indirect Effects of Protective Factors (N = 6,125)

Parameter estimates	Estimate (S.E)	95% CI
Support→Depressive symptoms→SI	-0.062 (0.009) ***	[-0.080, -0.044]
P_coping→Depressive symptoms→SI	-0.040 (0.006) ***	[-0.052, -0.028]
E_coping→Depressive symptoms→SI	0.061 (0.009) ***	[0.044, 0.078]
Health→Depressive symptoms→SI	-0.055 (0.008) ***	[-0.071, -0.040]
FAMILY →Depressive symptoms→ SI	-0.094 (0.035) **	[-0.164, -0.025]
FRIEND →Depressive symptoms→ SI	0.001(0.003)	[-0.005, 0.007]
SEX →Depressive symptoms→ SI	-0.036 (0.006) ***	[-0.047, -0.025]
EDU to→Depressive symptoms→ SI	0.004 (0.003)	[-0.002, 0.009]
Income →Depressive symptoms→ SI	-0.009 (0.003) **	[-0.015, -0.003]
IPV →Depressive symptoms→ SI	0.012 (0.003) ***	[0.006, 0.018]

Note. CI = confidence interval. Significant indirect effects (i.e., those whose confidence interval excludes zero) appear in bold. SI=suicidal ideation, P_coping=problem-focused coping, E_coping=emotion-focused coping, Family = having a family confidant. Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3.6.
Moderating Effects of Protective Factors Between Depressive Symptoms and Suicidal Ideation ($N = 6,125$)

	Standardized Estimate	95% CI
Depressive Symptoms × Problem-Focused Coping	0.020	[-0.038, 0.077]
Depressive Symptoms × Emotion-Focused Coping	0.042*	[0.001, 0.083] *
Depressive Symptoms × Social Support	-0.010	[-0.064, 0.044]
Depressive Symptoms × Having a Family Confidant	-0.010	[-0.060, 0.040]
Depressive Symptoms × Having a Friend Confidant	0.004	[-0.057, 0.064]

Note. CI = confidence interval. Significant indirect effects (i.e., those whose confidence interval excludes zero) appear in bold. Significance levels are denoted as * $p < .05$, ** $p < .01$, *** $p < .001$.

CONCLUSION

Individual level protective factors are crucial to reduce and prevent suicidal ideation among community dwelling older populations. Individuals' inner strength may deter the inclination to suicidal ideation. However, this research has revealed that these individual level protective factors may be easily influenced by family, community and macro-level protective factors via long-lasting and complex interaction processes (Eom, 2007; HS Kim & Heo, 2010; MoScicki, 1995). To reduce and prevent suicidal ideation in later life, assessment and intervention using ecological perspectives (H. Lee et al., 2014), are needed as well as research that takes into account cultural and social forces (Eom, 2007) among community-dwelling older adults. In addition, interventions to increase protective factors such as problem-focused coping, social support, and having a family confidant and to decrease risk factors such as depressive symptoms and emotion-focused coping are important. In addition, screening for experience of IPV, depressive symptoms and suicidal ideation among older adults is critical.

VITA

Sukyung Yoon took her bachelor's degree from Chung-Ang University in Seoul, South Korea and her MSW from Yonsei University in Seoul, South Korea. She worked with older adults about 10 years as a licensed social worker while also teaching college students for five of those years in Seoul, South Korea. She is currently teaching online and regular courses at the University of Tennessee in Knoxville across the BSW and MSW programs. She completed her PhD program at the University of Tennessee in Knoxville in May 2019.