

The Effect of *Hwa-byung* on Life Satisfaction among Family Caregivers of Gastric Cancer Patients: The Moderating Effect of Affective Responsiveness*

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Objective. The study was conducted to test the potential moderating effect of affective responsiveness on the relationship between *Hwa-byung* state, *Hwa-byung* trait, and life satisfaction. **Methods.** 67 responses were collected from family caregivers of patients diagnosed with gastric cancer at the Samsung Medical Center, South Korea. **Results.** The current findings explain the statistical significance of the impact of *Hwa-byung* state on caregivers' life satisfaction. Moreover, affective responsiveness of family functioning showed an interaction effect on the relationship between *Hwa-byung* state and life satisfaction. **Conclusions.** The result implies that providing psychoeducation and psycho-social interventions, such as family therapy, should be taken into account to promote life satisfaction of caregivers.

Key words : Family caregiver, *Hwa-byung*, Life satisfaction, Family functioning, Affective Responsiveness

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Compared to other countries, Korea has a relatively higher diagnosis rate of gastric cancer (Korean Statistical Information Service, 2019; National Cancer Information Center, 2019). According to the database of the Korean National Cancer Information Center (2019), gastric cancer showed the fourth highest cancer mortality rate in 2018, explaining 9.8% of cancer-related deaths of the year (Korean Statistical Information Service, 2019; National Cancer Information Center, 2019). Gastric cancer is a multifactorial disease associated with environmental and genetic factors. Koreans' high intake of salty, spicy, and cooked foods (environmental factors), and high infection rate of *Helicobacter pylori* (genetic factor) is believed to be the leading factors of its high incidence in Korea (Kweon, 2018; Lee, Yang, & Ahn, 2002). By the virtue of expanded cancer screening programs and enhanced medical technology, there has been a consistent rise in the number of cancer survivors (Choi et al., 2015). For the past decades, the relative survival rate of gastric cancer increased to 18.5%, and a five-year survival rate for gastric cancer showed a 32.6% rise compared to the data from 1993 to 1995 (National Cancer Information Center, 2019). Nonetheless, cancer survivors often undergo physical limitations from chronic pains such as fatigue and musculoskeletal conditions (Harrington, Hansen, Moskowitz, Todd, & Feuerstein, 2010; Ness, Wall, Oakes, Robinson, & Gurney, 2006). Especially since patients who

go through gastrectomy become vulnerable to multiple side effects, including dumping syndrome, aftercare following the surgical procedure is crucial for patients' health and well-being (Karimi, Islami, Anandasabapathy, Freedman, & Kamangar, 2014). Hence, during the treatment process, support from caregivers is essential.

Caregivers mainly aid physical support, emotional support, decision of medical plan, and financial support (Gaston-Johansson, Lachica, Fall-Dickson, & Kennedy, 2004; Glajchen, 2004; Haley, 2003). In Korean society, the majority of cancer patients' families undertake caregiving roles in most circumstances (Jeong, An, Park, & Park, 2017). In order to fulfill their own daily routines and to serve caregiving roles at the same time, more time and energy is needed. Thus, as caregivers reorganize their roles and priority within the family (Barbic, Mayo, White, & Bartlett, 2014), a large number of caregivers inevitably face challenges in their daily lives such as jobs and income. Also, being responsible for their family, particularly for the member with cancer, they often give priority to the patient's health over their own health. Consequently, they frequently experience high levels of stress, negative emotions including burnout, and such mental health issues as anxiety and depression (Kim, Wellisch, Spillers, & Crammer, 2007; Sarmiento, Gysels, Higson, & Gomes, 2017). Moreover, they undergo physical deterioration such as physical discomfort, lack of sleep, and

tiredness (Kim et al., 2007; Sarmiento et al., 2017).

Previous studies, however, still lack the consideration of the unique environment and the cultural context that family caregivers are situated in. In fact, taking the surrounding context into account is highly associated with perceiving and processing one's emotion in an adaptive way (Murata, Moser, & Kitayama, 2013). In Korean society, patients' families share caregiving roles within family members to distribute overloading tasks that the caregivers have to be responsible for (Jeong, Shin, Park, & Park, 2019). However, regardless of the amount of responsibility that family caregivers have on their shoulders, not many go through adequate discussions amongst multiple family members on the distribution of various caregiving roles (Jeong et al., 2017). Instead, family members, who are considered to be more flexible in time scheduling, assume responsibility, feeling pressured to serve the roles (Jeong et al., 2017). Such pressure is highly influenced by Korea's collectivistic culture which values the fulfillment of given roles that each family member has.

Despite the difficulties they undergo, the caregivers neither acknowledge their own pains nor seek for help. Rather, they often internalize and suppress their emotions to devote themselves to caregiving roles, even experiencing somatization (Ha et al., 2011; Stenberg, Ruland, & Miaskowski, 2010), which correspond to the experience of *Hwa-byung* (American Psychiatric

Association, 1994). According to Yong and McCallion (2003), Korean-born caregivers related themselves to *Hwa-byung* in the context of caregiving and addressed how their stress leads to physical pain beyond mental and cognitive distress. This can be explained by both internal and external factors. As an internal factor, caregivers themselves neglect their psychological distress, because they feel guilty and shame (Anthony-Bergstone, Zarit, & Gatz, 1988; Crespo & Fernández-Lansac, 2014). As an external factor, psychological pains are often devalued in Korean society (Kim & Rhi, 1976), assuming that it is one's lack of strength to overcome the psychological pains.

In those regards, the psychological and physical difficulties that caregivers experience can be interpreted as symptoms of *Hwa-byung* (Park, 2014). *Hwa-byung* is a culture-bound syndrome, also referred to as 'anger syndrome' (American Psychiatric Association, 1994). *Hwa-byung* derives from interpersonal relationships and suppression of anger and guilt (Lin, 1983). It is commonly caused by conflicts within the family, mostly with in-laws and marriage partners, poverty, and social frustration (Min, 1989). *Hwa-byung* can be explained in two categories: *Hwa-byung* state and *Hwa-byung* trait (Kwon et al., 2008). *Hwa-byung* state refers to symptoms of physical (somatics) and psychological state. Physical states of *Hwa-byung* involve insomnia, fatigue, indigestion, anorexia, palpitation, generalized aches and pains, and a feeling of epigastric mass, while

psychological states of *Hwa-byung* include depression, anxiety, fear of impending death, dysphoric affect, and anger (Kwon et al., 2008; American Psychiatric Association, 1994). *Hwa-byung* trait, on the other hand, reflects key personality characteristics, defense mechanisms, and coping strategies of those with *Hwa-byung*. They have a tendency to suppress or avoid negative emotions, and often use resignation coping strategies. Also, Min, Park, and Han (1993) elaborated that in stressful situations, they often show passive withdrawal, and blame external factors with thoughts in mind that they have no control over those issues.

Women in their 40s and 50s have the highest diagnosis rate of *Hwa-byung* in Korea (Park & Choi, 2014). From cultural aspects, middle-aged women have fewer opportunities to express and manage their stress appropriately (Park, Kim, Kang, & Kim, 2001), as Confucianism and patriarchal culture influenced attitudes of women to have patience and be loyal to their family. Another explanation is that middle-aged women have higher emotional vulnerability as they go through changes in hormone levels during the menopausal transition (Bromberger & Kravitz, 2011; Kim, 2004). Likewise, previous studies reported that female more than men have the filial obligation of caregiving (Jeong et al., 2017). Hence, when it comes to caregivers, they are likely to be at risk to not only *Hwa-byung* but also their well-being.

The more the caregivers invest in caregiving

to satisfy the patient's needs both physically and emotionally, the higher the chance of being exposed to high stress rate and lower life satisfaction (Gaston-Johansson et al., 2004; Song et al., 2012; Khalaila & Cohen, 2015). According to the previous studies, those with severe *Hwa-byung* state were associated with a higher stress rate and lower quality of life compared to those without the diagnosis (Park & Choi, 2014). Taking the context of family caregivers into account, difficulties in interpersonal relationships, perception of health, daily life performance, and high stress rate from *Hwa-byung* symptoms can negatively affect their evaluation of their life (Park & Choi, 2014, Yong & McCallion, 2003). In those regards, measuring *Hwa-byung* state and trait of the caregivers will allow further understanding of the experiences that Korean family caregivers encounter and its relationships to the caregivers' overall life satisfaction.

At the same time, each families cope with stressors differently. Thus, a healthy level of family functioning will be essential to fulfill the caregiving roles shared within the family. According to Epstein, Baldwin, and Bishop (1983), family functioning indicates the family dynamic to adapt to environments successfully and meet the needs. Those with healthy family functioning will adapt to changes and distribute family roles to minimize the hardness of caregiving roles more efficiently than those with poor family functioning. Besides, families with

healthy family functioning often report lower depression and anxiety (Edwards & Clarke, 2004). It alleviates psychological and physical distress, inducing an increase in life satisfaction (Rodríguez-Sánchez et al., 2011; Modanloo, Rohani, Farahani, Vasli, & Pourhosseingholi, 2019). When families experience an intense level of stress, it may be detrimental to the whole family, even leading to changes in family functioning (Dorros, Card, Segrin, & Badger, 2010; Schuler, Zaider, Li, Hichenberg, Masterson, & Kissane, 2014). For instance, negative changes in family functioning may exacerbate the burden of the family, leading to health problems and family conflicts such as being indifferent to patients of family members (Park & Hyun, 2000). As a result, poor family functioning may act as a risk factor that could possibly increase the effect of the caregiver's high level of distress on the caregiver's life satisfaction.

Family functioning is categorized into six dimensions: problem solving, communication, roles, affective responsiveness, affective involvement, and behavioral control (Epstein et al., 1983). Out of the six dimensions, affective responsiveness plays a crucial part in regards to family caregivers' well-being. Affective responsiveness within family values exchange of emotions and empathy when forming and maintaining relationships (Epstein et al., 1983). In previous studies on caregivers, there was a close association with empathy in family and life

satisfaction (Lee, Brennan, & Daly, 2001; Shim, Barroso, & Davis, 2012; Sutter, Perrin, Chang, Hoyos, Buraye, & Arango-Lasprilla, 2014). Caregivers with higher empathy levels formed better relationships with the patients and were more positive and acceptant to their patients' physical state (Shim et al., 2012). Along with this line, those with healthier affective responsiveness are more likely to have empathic communication within caregivers and patients. In other words, those with low quality of affective responsiveness in the family may not share their emotions in an appropriate way and rather suppress or avoid negative emotions. This can elevate the risk of higher psychological distress and lower life satisfaction, as well as *Hwa-byung* experience.

Considering what we know and what we do not know about family caregivers' experience regarding cancer caregiving, the current study aims to investigate the relationship between *Hwa-byung*, affective responsiveness in family, and caregiver's life satisfaction. Moreover, the study will test the potential moderating effect of the affective responsiveness on the relationship between *Hwa-byung* and life satisfaction. If there is an emotional buffer from healthy family dynamics and affective responsiveness, we believe that it will alleviate the effect of *Hwa-byung* on a global life satisfaction state. The overall structure of the thesis has been depicted in Figure 1.

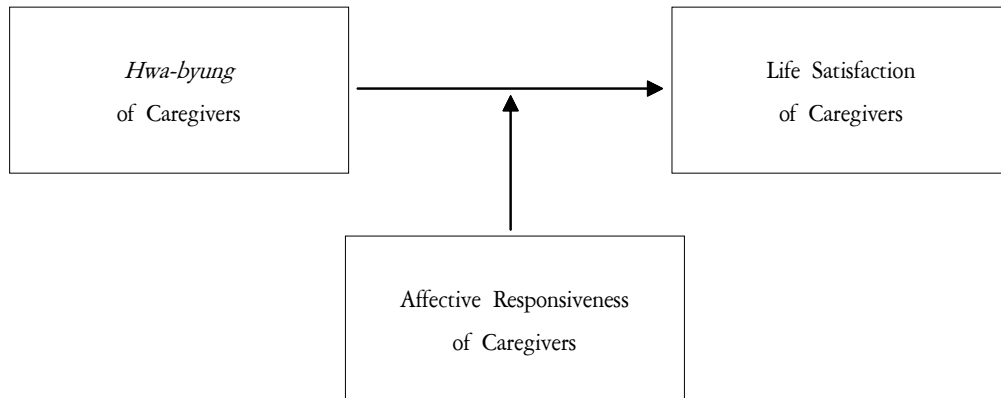


Figure 1. Hypothetical Model

Method

Participants

The inclusion criteria of the family caregivers were as follows. The participants were family caregivers of gastric cancer patients. The patients had to have undergone surgical treatment for their gastric cancer. The survey was taken within one month following the surgery. The caregivers were identified as the ones who accompanied the patients to the clinic visit. Participants had to be 19 years old or above. Additionally, it was necessary for the participants to have no psychological or linguistic barriers to complete the survey in Korean language.

Procedures

This research was approved by the Institutional Review Board of Samsung Medical

Center, South Korea. The research participation opportunities were advertised on the bulletin boards of the Gastric Cancer Center of the recruiting hospital. When the caregivers showed their interest in participating in the research, more details of the study were provided by a research nurse on site. After being explained all the details, each participant signed the informed consent and was led to a private space to complete the survey alone. It took 20 minutes on average for a participant to complete the survey. The data was collected from April 2018 to November 2019.

Measurement

The data collection was performed through survey to measure current psychological and physical state of family caregivers, including their overall satisfaction of life, and affective responsiveness. The survey contained basic

inquiry form on demographic variables of family caregivers, such as age, sex, relationship with patients, duration of caregiving, existence of non-family caregiver, and three questionnaires including the *Hwa-byung* Scale (Kwon et al., 2008), McMaster's Family Functioning Device (Epstein et al., 1983), and the Satisfaction with Life Scale questionnaire (Diener, Emmons, Larsen, & Griffin, 1985).

Hwa-byung

The *Hwa-byung* Scale (Kwon et al., 2008) was used to measure both *Hwa-byung* state and *Hwa-byung* trait of the participants. It is a self-report questionnaire on a five-point Likert scale. Composed of 31 questions, the scale has 15 questions on *Hwa-byung* state and 16 questions on *Hwa-byung* trait. The total score ranges from 0 to 124. Higher scores are interpreted as higher severity of *Hwa-byung*. In order to be diagnosed with *Hwa-byung* at clinical level, The cutoff score of *Hwa-byung* state should be 30. In the current study, Cronbach's alpha of *Hwa-byung* state was 0.85 and that of *Hwa-byung* trait was 0.84.

Affective Responsiveness

McMaster's Family Functioning Device (Epstein et al., 1983) was employed to measure the participants' family functioning. Participants respond on a four-point Likert

scale from 1 (strongly agree) to 4 (strongly disagree). From the total of 53 question items, affective responsiveness subscale, which measures appropriateness of emotional use within family members, consists of six items: 'we are reluctant to show our affection for each other'; 'some of us just don't respond emotionally'; 'we don't show our love for each other'; 'tenderness takes second place to other things in our family'; 'we express tenderness'; 'we cry openly'. Score ranges from 6 to 36. Higher scores are interpreted as lower quality of affective responsiveness. Cronbach's alpha of affective responsiveness in the current study was 0.80.

Life Satisfaction

The Satisfaction with Life Scale questionnaire (Diener et al., 1985) was used to measure caregivers' global judgmental component of one's life satisfaction. This assesses the subjective well-being of the participant's life as a whole. In other words, instead of suggesting specific domains of physical health or financial state, it enables participants to integrate their well-being depending on their own domains that they put weight on (Diener et al., 1985). It consists of five questions on a seven-point Likert scale from 1 (strongly disagree) to 7 (strongly agree). The items are as follows: 'in most ways my life is close to my ideal'; 'the conditions of my life are excellent'; 'I am satisfied with my life'; 'so far I have gotten the important things I want

in life'; 'if I could live my life over, I would change almost nothing'. The total score ranges from 5 to 35. Higher scores imply higher life satisfaction. The scale demonstrated high internal consistency in the current study (Cronbach's alpha = 0.93).

Analytical Procedures

The current study used moderated hierarchical multiple regression analyses to see the relationship among caregivers' *Hwa-byung*, affective responsiveness, and caregivers' life satisfaction. A minimum of 43 participants were needed to have the statistical power of .80 (Cohen, 1988).

In the moderated hierarchical multiple regression analyses, caregivers' age and sex were included as predictors in Model I. Then, to see the effect of unique predictive power, *Hwa-byung* state and trait were entered as predictors in Model II, and *Hwa-byung* state and trait, as well as affective responsiveness were included in Model III. Lastly, interaction terms of *Hwa-byung* state and trait with affective responsiveness were entered in Model IV.

Results

Participant Descriptive

This study included 79 participants, but those

with missing data were excluded in the analysis to avoid biased estimates ($N=67$). Age varied from 24 to 80 ($M= 49.79$; $SD= 10.89$). Among the participants, 42 were female and 25 were male. Caregivers' relationship with cancer patients were mostly spouse ($n=45$, 67.16%), while 14 caregivers (20.90%) were offspring, and there were other family members such as sibling ($n=2$, 2.99%), parent ($n=2$, 2.99%), daughter-in-law ($n=1$, 1.49%), and cousin ($n=1$, 1.49%). Severity of *Hwa-byung* varied but among the caregivers, five female participants (7%) reported a clinical level of *Hwa-byung*. Duration of caregiving varied from less than one month to six months ($M= 1.43$; $SD= 0.93$). Lastly, none of the family received extra support from non-family caregiver. Table 1 indicates the characteristics of the participants.

The participants' *Hwa-byung* state ranged from 0 to 35 ($M= 17.10$; $SD= 8.01$). *Hwa-byung* trait ranged from 0 to 49 ($M= 27.21$; $SD= 7.98$). Affective responsiveness ranged from 6 to 19 ($M= 13.51$; $SD= 2.68$). For the outcome variable, caregiver's life satisfaction scores varied from 5 to 25 ($M= 22.28$, $SD= 6.55$). The correlations of characteristics of caregivers are addressed in Table 2. *Hwa-byung* state was associated with the duration of caregiving ($r= 0.27$, $p < 0.05$). It also had strong positive correlation with *Hwa-byung* trait ($r= 0.47$, $p < 0.01$), and strong negative correlation with life satisfaction ($r= -0.37$, $p < 0.01$). *Hwa-byung* trait indicated significant correlation with

Table 1. Demographic Characteristics of Caregivers

Items	<i>M</i> (<i>SD</i>)	<i>n</i> (Percent)
Age	49.79 (10.89)	
Sex		
Male		25 (37.31)
Female		42 (62.69)
Duration of caregiving	1.43 (0.93)	
HBS	17.10 (8.01)	
HBT	27.21 (7.98)	
FAD_AR	13.51 (2.68)	
SWL	22.28 (6.55)	

Note. HBS = *Hwa-byung* State; HBT = *Hwa-byung* Trait; FAD_AR = Affective Responsiveness of Family Functioning; SWL = Life Satisfaction

Table 2. Summary of Correlations among Characteristics of Caregivers

	Age	Sex	Duration of Caregiving	<i>Hwa-byung</i> State	<i>Hwa-byung</i> Trait	Affective Responsiveness	Life Satisfaction
Age	1	-.12	.09	-.10	.12	.10	.17
Sex		1	.07	.15	-.10	-.09	-.24*
Duration of caregiving			1	.27*	.12	.02	-.27*
<i>Hwa-byung</i> State				1	.47**	.16	-.37**
<i>Hwa-byung</i> Trait					1	.34**	-.07
Affective Responsiveness						1	-.03
Life Satisfaction							1

** . Correlation is significant at the 0.01 level (2-tailed); * . Correlation is significant at the 0.05 level (2-tailed)

affective responsiveness ($r = 0.34, p < 0.01$). with sex ($r = -0.24, p < 0.05$) and the duration of caregiving ($r = -0.27, p < 0.05$). Lastly, life satisfaction was negatively correlated

Analytical Results

Hwa-byung state was entered as a predictor variable. The categorical variable, sex was dummy coded, and *Hwa-byung* state and affective responsiveness were centered to avoid multicollinearity. No outliers were found. The result for the moderated multiple regression analysis, with *Hwa-byung* state as predictors, are presented in Table 3. *Hwa-byung* trait was not used in the moderated multiple regression analysis because it did not significantly predict life satisfaction ($\beta=-.09, p=0.20$).

In Model I, age and sex did not predict the outcome variable ($\beta=.09, p=0.23$ and $\beta=-3.02, p=.07$ respectively) of family caregivers. With demographic variables being controlled, in Model II, *Hwa-byung* state explained 10.7% of the variance in the caregivers' life satisfaction ($p<.05$). Negative relationships were found, which can be interpreted as those with higher *Hwa-byung* state tend to have lower life

satisfaction. In Model III, affective responsiveness was added in the regression procedures but did not significantly predict life satisfaction ($\beta=-.02, p=.94$).

In Model IV, the interaction term between *Hwa-byung* state and affective responsiveness significantly explained an additional 7.8% of the variance for life satisfaction ($\Delta=.26, p<.05$). The result implies that the effect of *Hwa-byung* state on life satisfaction differs for different levels of affective responsiveness.

Discussion

Summary of results

The study was conducted to test the potential moderating effect of affective responsiveness on the relationship between *Hwa-byung* state, *Hwa-byung* trait, and life satisfaction in family caregivers. In the current study of Korean family

Table 3. Predictors of Caregiver's Life Satisfaction

Predictors	Model I		Model II		Model III		Model IV	
	B (SE)	p Value	B (SE)	p Value	B (SE)	p Value	B (SE)	p Value
Age	.09 (.07)	.23	.07 (.07)	.31	.07 (.07)	.31	.09 (.07)	.19
Sex	-3.02 (1.62)	.07	-2.41 (1.55)	.13	-2.42 (1.53)	.13	-3.03 (1.53)	.05
HBS			-.27 (.09)	.01	-.27 (.10)	.01	-.26 (.09)	.01
FAD_AR					-.02 (.29)	.94	-.05 (.28)	.87
HBS_X_FAD_AR							.08 (.03)	.01

Note. HBS= *Hwa-byung* State; FAD_AR= Affective Responsiveness of Family Functioning; HBS_X_Fad_AR= Interaction between *Hwa-byung* State and Affective Responsiveness

caregivers of gastric cancer patients, the majority of the participants were female (62.69%) and patient's spouses (67.16%). This finding is compatible with that of previous studies, that patients in Korea often rely on female caregivers (Jeong et al., 2017). Also, female caregivers were correlated to lower life satisfaction compared to male caregivers. This finding is consistent with previous studies that female caregivers appear to be more vulnerable on mental health status compared to those of male (Hagedoorn, Buunk, Kuijer, Wobbles, & Sanderman, 2000; Kim, Baker, & Spillers, 2007; Shin, Ko, Lee, Kim, & Song, 2019).

In the findings, *Hwa-byung* trait was highly correlated with *Hwa-byung* state, as these factors closely interact with each other (Kwon et al., 2008; Park, 2014). Moreover, longer duration of caregiving was associated with higher *Hwa-byung* state and lower life satisfaction. Consistent with previous studies, being exposed to a long-term care may exacerbate physical deterioration and psychological distress, which overall becomes a threat to caregivers' wellness (Kim et al., 2007; Sarmiento et al., 2017).

In the moderation analysis, neither age nor sex of the caregivers were significant factors of the caregiver's life satisfaction. The result indicated that *Hwa-byung* state was significantly related to the caregiver's life satisfaction. Considering the deficits caused by the severity of *Hwa-byung* on the individual's personal relationship, occupational, and health level,

caregivers are likely to experience lower life satisfaction. On the other hand, the effect of *Hwa-byung* trait on life satisfaction was not statistically significant, meaning an inconsistent relationship with *Hwa-byung* trait and life satisfaction. This can be supported by the principle of multifinality (Wilden, 1980), which is a theory that one component does not necessarily lead to one pathway. In other words, interaction between other biological, psychological, and social factors that caregivers encounter may have induced different outcomes. For instance, Lazić, Gavrilov-Jerković, and Jovanović (2019) suggested that high positive affectivity provide buffer to life satisfaction, regardless of the levels of negative traits. Hence, it is genuine that *Hwa-byung* trait is a risk factor of caregivers' well-being, however, considering an individual's different context and surrounding environment, resulting in different trajectories explains the insignificant relationship on *Hwa-byung* trait and life satisfaction.

Furthermore, affective responsiveness in family functioning showed significant interaction effect on the relationship between *Hwa-byung* state and caregiver's life satisfaction. In other words, a healthy level of affective responsiveness in family functioning (lower score on affective responsiveness scale) alleviates the negative impact of *Hwa-byung* state on life satisfaction. As it is so ingrained in Korean culture that fulfilling caregiving roles are a part of family duty, many caregivers' efforts and emotions are

often suppressed and unrecognized. Especially, if caregivers had lived in an environment that conveys negative or ignoring responses to emotions, caregivers may find it difficult to acknowledge and resolve their emotions. On the other hand, Having healthy affective responsiveness, where family members properly respond to emotion-related stimuli within the appropriate context, can support caregivers on expressing and dealing with their negative emotions. Especially when dealing with anger, families with healthy affective responsiveness tend to express their anger in a more constructive manner (Epstein et al., 1983). Park (2014) addressed that one efficient way to lower *Hwa-byung* symptoms is to express their emotions properly, and relieve anger through psychological acceptance of their emotional experiences. Thus, well functioning of affective responsiveness can relieve accumulated repressed emotions of the caregivers, which will eventually lower the effect of *Hwa-byung* on life satisfaction.

Clinical Implications

The current study explains that *Hwa-byung* state may lower life satisfaction, while healthy level of affective responsiveness within family functioning may ease the impact of *Hwa-byung* state on life satisfaction. In healthy families with strong affective responsiveness, family members show intimate exchange, valuing forming empathy within the family. Such behavior may

act as a protective factor on the effect of psychological and physical *Hwa-byung* state on life satisfaction. Thus, in order to seek for improvement of overall life satisfaction of family caregivers, several implementations can be suggested: improvement of family functioning through individual, and group therapy, and psychoeducation.

First, considering the context of Korean caregivers, individual and family-based emotion-focused therapy should be suggested in order to strengthen affective responsiveness within the family. One suggestion to enhance affective responsiveness is to include emotion-focused activities in the therapy to guide how to address and respond to the family's emotional stimuli. For instance, attachment-based family therapy (ABFT; Diamond, Diamond, & Levy, 2014) may be used to guide caregivers individually to elaborate their avoided emotions such as anger and shame from caregiving. In this session, each family member will receive support from therapists to be empathic and be open to others feelings. Then, there will be conjoint sessions within the family to directly communicate their unexpressed emotions (Diamond, Sharhar, Sabo, & Tsvieli, 2016). Through these trials, directly having affective experience with patients may encourage caregivers to have productive emotional processing instead of having to avoid or suppress their emotions, and improve their level of affective responsiveness.

Lastly, psychoeducation should be provided

for the enhancement of information support. Since long-term treatment processes can be burdensome to both patients and caregivers, there should be an appropriate guide to cope with their physical or psychological difficulties to minimize their distress. When caregivers first provide various supports to patients, not many expect what they will be going through, especially in regards to physical and emotional difficulties. Also, as they put more weight on the progress of their patients' health, many caregivers often become indifferent to their own physical and psychological well-being. Hence, psychoeducation should be provided to caregivers at the beginning of the patient's treatment process. In those sessions, in addition to general information on cancer, patients' needs, and roles of caregivers, they should address information on emotional difficulties that caregivers often face, and resources that caregivers can utilize when they experience such difficulties. At the same time, having to meet in a group therapy session to enable family caregivers to thoroughly discuss patient's needs and distribution of caregiving roles may also contribute to minimizing conflicts and unequal distribution of the roles.

Limitations and Future Suggestions

This study has several limitations. First, the analysis was done with relatively small samples. In order to have stronger statistical power, additional research with larger samples is

recommended. Second, a relatively short period of caregiving may have made it difficult to see the caregivers with severe *Hwa-byung* symptoms. In this study, mean of the caregivers' *Hwa-byung* state did not pass the cutoff score of the clinical level of *Hwa-byung* ($M= 17.10$). Thus follow-up studies with the same participants are needed to see the changes in *Hwa-byung* state among caregivers. Third, there may be other factors, for instance, financial status or social relationships, that may play a role in their lower life satisfaction besides the severity of *Hwa-byung* state. For further understandings in the relationship between the severity of *Hwa-byung* state and caregivers' life satisfaction, addressing specific domains on what caregivers prioritize, and how it impacts caregivers' life satisfaction in the further study is suggested. Fourth, there are limits in generalizability for several reasons. The study focused only on family caregivers of gastric cancer patients. Caregivers all have different roles based on the diagnosis of each patient. It is possible that the level of severity in *Hwa-byung* and life satisfaction may depend on different patients' needs and their health conditions. Likewise, although most of the caregivers in Korea are family caregivers, there are still minorities who are single caregivers or receive extra help through non-family caregivers' support. Hence, for further research, it is recommended to identify patients' needs, specific roles and degree of loadings of each caregiver to compare its effect on their well-being. Last but

not least, this study measured *Hwa-byung*, which reflects the uniqueness of Korean cultural background. In other words, there are limits to consider populations representing other cultural backgrounds or ethnicity who may be going through a similar situation. Therefore, approaching different cultural groups is needed to seek cultural aspects that influence caregiver's life satisfaction from different regions.

Conclusion

The current study on the Korean caregivers of gastric cancer patients found the important role of family dynamics in caregivers' overall life satisfaction. Korean family caregivers undergo physical and psychological difficulties, which correspond to *Hwa-byung*, from the pressure of serving their caregiving roles. The current study provides insights that healthy family dynamics and affective responsiveness can be a protective factor to alleviate the effect of *Hwa-byung* on life satisfaction.

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위암 환자 보호자의 화병이 삶의 만족도에 미치는 영향: 정서적 반응성의 조절 역할

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본 연구는 화병 증상과 화병 특성이 삶에 대한 만족도에 미치는 영향에 가족 기능이 조절 역할을 하는지 검증하고자 하였다. 삼성서울병원에서 위암 환자의 성인 가족 보호자를 대상으로 수집되었다. 가족 보호자의 화병, 정서적 반응성, 그리고 삶의 만족도 척도를 포함하였다. 결과적으로 본 연구에서는 총 67명의 위암 환자의 성인 가족 보호자가 수집되었으며, 화병 증상이 심각할수록 가족 보호자의 삶의 만족도가 낮아짐을 시사했다. 그리고 가족 기능의 하위 요인 중 정서적 반응성이 원활한 수준일 때, 화병 증상이 가족 보호자의 삶의 만족도에 미치는 영향에 보호 요인으로 작용할 수 있는 것으로 조사되었다. 본 연구는 위암 환자의 가족 보호자가 경험하는 문화적 맥락을 고려하여 삶의 만족도에 미치는 영향을 확인하였다는 점에서 의의가 있다.

주제어 : 화병, 가족 보호자, 삶의 만족도, 가족 기능, 정서적 반응성