The impact of
mental adjustment styles
on quality of life
in patients with cancer

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mental adjustment styles
on quality of life
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**The impact of mental adjustment styles on quality of life
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Mental adjustment and coping styles may affect psychological distress and quality of life in cancer patients. The objective of this study was to evaluate the impact of certain mental adjustment styles on psychological distress such as anxiety and depression symptoms and various domains of quality of life in cancer patients.

A cross-sectional sample of 169 cancer patients (64 males, 105 females) completed the questionnaires. The Mini-Mental Adjustment to Cancer (Mini-MAC) scale was used to measure individual coping styles to cancer. Distress and quality of life was assessed using the Hospital Anxiety and Depression Scale (HADS) and the Functional Assessment of Cancer Therapy-General (FACT-G) scale.

Higher Anxious Preoccupation (AP) and Hopeless/Helplessness (HH) scores of the Mini-MAC were associated with more severe

anxiety and depression symptoms measured by the HADS. AP was the most potent negative predictor for the Physical, Emotional, and Functional Well-Being measured by FACT-G. In addition, HH was found to have significantly related to poor quality of life over all domains of the FACT-G. Fighting Spirit positively predicted Functional Well-Being and overall quality of life (FACT-G total scores) and it negatively predicted depression. Among various domains of quality of life, the Emotional Well-Being dimension seemed to be strongly influenced by mental adjustment styles such as AP and HH (Adjusted R^2 for AP and HH = 0.425, p<0.001).

The present study showed that the mental adjustment style in cancer patients plays an important role in the psychological distress and quality of life. These findings indicate that assessment and intervention of the mental adjustment and coping styles to cancer is essential for reducing psychological sequelae and improving quality of life in patients with cancer.

Key words: quality of life, cancer, mental adjustment, coping, distress

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I. INTRODUCTION

Cancer, the largest cause of death is a fear and threat to people and the prevalence of cancer is rapidly elevating. The diagnosis of cancer, active treatment, palliative care and aftermath of cancer involve a long process of adaptation to multiple threats and stressful events. Cancer patients experience considerable psychological distress and adverse quality of life for patients throughout the disease course [1-4]. Mental adjustment and coping styles have been considered as very important determinants of psychological morbidity and quality of life [5-7] and of treatment compliance and survival in cancer patients [8, 9].

Cancer-related quality of life is an individual's assessment of daily activities and sense of well-being during the disease course. Quality of life in cancer patients is considered as one of the clinical end points and improving quality of life is one of the primary therapeutic goals. Therefore, assessment of quality of life is considered as an important factor in the overall care of patients with cancer. The Functional Assessment of Cancer Therapy–General

(FACT-G) [10] scale, an internationally popular quality of life instrument, is a comprehensive multidimensional self-questionnaire specifically designed for cancer patients.

Mental adjustment has been defined as the cognitive and behavioral responses of an individual to a threat such as the cancer diagnosis [11, 12], which covers cognitive appraisal of a threat, willful cognitive or behavioral efforts to manage external or internal demands [13] and emotional reactions to cancer [14]. For disease-specific instrument evaluating mental adjustment and coping to cancer, the Mini-Mental Adjustment to Cancer (Mini-MAC) scale would allow assessment of psychological responses in the patients who suffer from cancer [15]. The Mini-MAC scale consists of the following five adjustment styles: Fighting Spirit (FS), which characterized by a determination to fight the illness and the adoption of an optimistic attitude, Hopeless/Helplessness (HH), which is related to feelings of giving up and engulfment by knowledge of the diagnosis and a pessimistic attitude, Anxious Preoccupation (AP), which characterized by constant preoccupation with cancer and feelings of devastation, anxiety, fear and apprehension, Fatalism (FA), which measure a patient's tendency to accept unavoidable situations such as putting oneself in the hands of God, and Cognitive Avoidance (CA), which is the tendency to block off or ignore problem or emotions [15].

Previous research suggests that specific mental adjustment styles affect on psychological distress and quality of life in cancer patients. A prospective study for patients with head and neck cancer showed that an emotion-oriented coping style may be a positive predictor during radiation treatment [16]. Hopeless or helpless attitude was reported to be an important variable related to quality of life in patients with breast cancer [17]. In addition, escape-avoidance coping strategies were shown to be related with significant distress and poorer quality of life in patient with melanoma [18].

Because early detection of cancer and great strides in cancer

treatment, recent research for patients with cancer has reflected a conceptual shift toward perceiving cancer as a chronic disease. According to this perspective, the use of adaptive coping strategies to deal with the stress of a chronic life-threatening illness seems to be very important for improving quality of life. Accordingly, assessment and intervention of the mental adjustment and coping styles to cancer may be essential for understanding and approaching of psychological sequelae and quality of life in patients with cancer.

The aim of the present study was to determine psychosocial variables to affect psychological distress and quality of life and to investigate the impact of the specific mental adjustment styles measured by the Mini-MAC scale on psychiatric distress and each domain of quality of life in Korean patients with cancer.

II. MATERIALS AND METHODS

1. Subjects

A total of 188 cancer patients (72 males, 116 females) were recruited from the outpatient clinic in the Yonsei Cancer Center, a tertiary referral hospital in Korea. Subjects were outpatients 1) with a pathologic diagnosis of cancer with any type or stage, 2) 20 to 75 years, 3) aware of the diagnosis of cancer, 4) able to understand the study and respond to the scales. To minimize the impact of physical problem on quality of life, patients were excluded if they were applied to the Eastern Cooperative Oncology Group (ECOG) [19] score 2 or above. Written informed consent was obtained from all subjects prior to the beginning of the study, and the protocol was approved by the Institutional Review Board. Of 188 patients, 19 (11.2%) did not complete the questionnaire. In the final analysis, 169 cancer patients (64 males, 105 females) were included. Demographic data were collected from a self-administered questionnaire and medical chart.

2. Assessment

A. Mini-MAC scale

The Mini-MAC scale was used to measure individual coping styles to cancer. The Mini-MAC is a new refined, economical and reliable self-rating instrument derived from Mental Adjustment to Cancer (MAC), which consists of 29 items using a 4-point Likert scale [15]. It included the five factors: 4 items for FS, 8 items for HH, 8 items for AP, 5 items for FA, and 4 items for CA. The possible responses to each statement are: (1) 'definitely does not apply to me', (2) 'does not apply to me', (3) 'applies to me', and (4) 'definitely applies to me'. The Mini-MAC has been previously validated for

the Korean cancer patients and the Korean version has been shown to have overall good reliability and validity in a Korean sample for original 5 subscales of the Mini-MAC [20].

B.   ECOG performance status scale

The ECOG performance status scale was used [19]. This is an observer scale of patients' physical ability rating from 0 to 4. Zero indicates that the patient is able to carry out all normal activities, and 4 indicates that the patient is completely disabled.

C.   Hospital Anxiety and Depression Scale (HADS)

The assessment of psychological morbidity was performed using the Korean HADS. This was designed to assess psychological distress of patients in medical and surgical settings including cancer patients [21]. The HADS is a 14-item instrument that reflects two dimensions; depression (7 items) and anxiety (7 items). Each item is rated on a four-point scale from 0 to 3, with a maximum of 21 for anxiety and depression, respectively. The HADS has been previously validated for the Korean population [22].

D.   Functional Assessment of Cancer Therapy-General (FACT-G)

To measure quality of life in cancer patients, the FACT-G [10] (Version 4) scale was used. It is a 27-item self-rating questionnaire using a 5-point Likert scale ranging from 0 ("not at all") to 4 ("very much"). The FACT-G covers four primary quality of life domains: Physical Well-Being (7-items), Social/Family Well-Being (7-items), Emotional Well-Being (6-items); and Functional Well-Being (7-items). The Physical Well-Being involves disease-related, treatment-related, and general bodily concerns such as nausea and fatigue. The Social/Family Well-Being reflects the ability to participate in usual family and social activities such as social support and

emotional closeness. The Emotional Well-Being includes emotional problems such as anxiety, depression and fear of death. The Functional Well-Being indicates the ability to engage in and perform one's usual routines. The total FACT-G score is the summation of the 4 subscale scores. Higher scores reflect better quality of life.

3. Statistical analysis

Kolmogorov-Smirnov test assessed normal distribution.

To identify possible independent variables predicting various domains of quality of life, the differences and relationships between demographic and clinical characteristics were evaluated. Student's t-test was conducted whether there are any differences according to the gender. Pearson's correlation coefficients were calculated for the demographic and psychosocial factors, the Mini-MAC subscales, the HADS subscales and the FACT-G subscales. For interscale correlation coefficients between the Mini-MAC subscales and the HADS and FACT-G subscale, partial correlation analysis was performed to controlling the effects of demographic and clinical variables such as duration of illness and cancer stage. In addition, to examine the effects of different cancer types on the subscales of the Mini-MAC, HADS and FACT-G, a multivariate analysis of covariance (MANCOVA) and a posthoc one-way analysis of covariance (ANCOVA) after inclusion of duration of illness and cancer stage as covariates were conducted.

Multiple linear regression models were created for each dimension of the HADS and FACT-G subscales. When correlations between factors were found, they were selected as the independent variables. The optimal regression model was developed through the stepwise procedure. Collinearity diagnostics were performed by using the Variance Inflation Factor (VIF) values. The multicollinearity is to be concerned with any value of VIF > 10. The nominal variables such as the cancer types were entered into the model after the change to dummy variables. The statistical significance was accepted when $p < 0.05$. All tests were two-tailed. The data were analyzed using SPSS 15.0 for Windows (SPSS Inc., Chicago, IL, USA).

III. RESULTS

1. Characteristics of subjects

The sample was predominantly female (62.1%), with 53.6±10.4 years. Most subjects had breast (43.8%), stomach (30.2%), or colorectal (23.1%) cancer. ECOG performance status of all participants was 0 (64.5%) or 1 (35.5%) (Table 1).

Table 1. Sociodemographic and clinical characteristics of subjects

	Mean±SD	Number	
Age	53.6±10.4		
Male/Female		64/105	37.9%/62.1%
Education			
<7 years		13	7.7%
7–12 years		102	60.3%
>12 years		54	32.0%
Marital status			
married		142	84.0%
unmarried		11	6.5%
divorced		7	4.1%
widowed		9	5.3%
Employment			
employed		54	32.0%
retired		24	14.2%
unemployed		91	53.8%
Duration of Illness	26.7±44.1		
Cancer site			
breast		74	43.8%
stomach		51	30.2%
colorectal		39	23.1%
other		5	3.0%
Cancer Stage			
I		65	38.5%
II		48	28.4%
III		40	23.7%
IV		16	9.5%
ECOG			
0		109	64.5%
1		60	35.5%

SD: standard deviation, ECOG: Eastern Cooperative Oncology Group performance status scale

2. Identification of possible predicting factors for quality of life

In the t-test according to genders, there were no significant differences of mental adjustment styles, psychological distress and various domains of quality of life between genders (Table 2).

Table 2. Comparisons of the Mini-MAC, HADS and FACT-G subscale scores between male and female patients with cancer

	Male (N=64)	Female (N=105)
Duration of Illness	22.8±38.3	29.1±46.1
Mini-MAC		
Fighting Spirit	11.7±1.3	11.4±1.5
Anxious Preoccupation	20.0±3.2	19.8±4.1
Fatalism	13.8±1.9	14.3±2.3
Hopeless/Helplessness	15.2±3.0	14.3±3.9
Cognitive Avoidance	10.4±1.5	10.3±2.2
HADS		
HADS-anxiety	7.1±3.0	6.8±3.9
HADS-depression	8.3±3.5	7.2±4.0
FACT-G		
Physical Well-Being	20.7±3.2	21.0±5.0
Social/Family Well-Being	15.3±3.6	15.7±5.5
Emotional Well-Being	16.8±3.5	16.9±4.9
Functional Well-Being	16.2±4.4	16.7±7.1

Data are mean±standard deviation values. Mini-MAC: Mini-Mental Adjustment to Cancer scale, HADS: Hospital Anxiety and Depression Scale, FACT-G: Functional Assessment of Cancer Therapy-General.

For the relationship between the demographic and clinical characteristics, the duration of illness and cancer stage had significant correlations with some subscales of the Mini-MAC, the HADS and the FACT-G. In particular, cancer stage showed negative relations with FS and FA of Mini-MAC and positive relations with anxiety and depression scores of the HADS. Cancer stage also had negative correlation with Physical Well-Being of the FACT-G (Table 3).

Table 3. Subject's demographic and clinical characteristics significantly related to the Mini-MAC, HADS and FACT-G subscale scores

	Age	Education	Duration of Illness	Cancer Stage
Mini-MAC				
Fighting Spirit	-0.069	0.059	- 0.039	- 0.248**
Anxious Preoccupation	-0.134	- 0.040	- 0.234**	0.206**
Fatalism	-0.008	0.016	0.007	- 0.196*
Hopeless/Helplessness	0.066	- 0.038	0.107	0.148
Cognitive Avoidance	0.125	0.006	- 0.032	- 0.090
HADS				
HADS-anxiety	-0.095	- 0.050	- 0.161*	0.237**
HADS-depression	0.025	- 0.071	- 0.132	0.236**
FACT-G				
Physical Well-Being	-0.049	0.191*	0.164*	- 0.190*
Social/Family Well-Being	-0.013	0.103	- 0.029	- 0.064
Emotional Well-Being	0.041	0.126	0.267**	- 0.121
Functional Well-Being	-0.062	- 0.013	0.000	- 0.108

All tests are two-tailed. $*p<0.05$; $**p<0.001$. Mini-MAC: Mini-Mental Adjustment to Cancer scale, HADS: Hospital Anxiety and Depression Scale, FACT-G: Functional Assessment of Cancer Therapy-General.

For interscale correlations between the Mini-MAC subscales and the HADS and FACT-G subscale after removing the effects of duration of illness and cancer stage, various significant relations were observed (Table 4). Mental adjustment styles of FS, AP, FA and HH, except for CA of the Mini-MAC scale, were significantly related with anxiety and depression of HADS and subscales of the FACT-G. CA had positive relation with HADS-A score, but it had no significant correlations with other factors.

Table 4. Interscale correlation coefficients for the Mini-MAC subscales and the HADS and FACT-G subscale scores

	HADS-A	HADS-D	PWB	SWB	EWB	FWB
Fighting Spirit	- 0.230*	- 0.294**	0.036	0.197*	0.182*	0.312**
Anxious Preoccupation	0.693**	0.689**	- 0.364**	- 0.211*	- 0.683**	- 0.466**
Fatalism	- 0.356**	- 0.403**	0.196*	0.255**	0.361**	0.280**
Hopeless/Helplessness	0.543**	0.628**	- 0.377**	- 0.256**	- 0.589**	- 0.402**
Cognitive Avoidance	0.174*	0.086	0.028	0.020	- 0.104	0.076

All tests are two-tailed. The duration of illness and cancer stage were used as control variables. *$p<0.05$; **$p<0.001$. Mini-MAC: Mini-Mental Adjustment to Cancer scale, HADS: Hospital Anxiety and Depression Scale, HADS-A: anxiety, HADS-D: depression, FACT-G: Functional Assessment of Cancer Therapy-General, PWB: Physical Well-Being, SWB: Social/Family Well-Being, EWB: Emotional Well-Being, FWB: Functional Well-Being.

For the effects of cancer types, MANCOVA and a posthoc ANCOVA showed that patients with stomach cancer had significantly higher HH score of the Mini-MAC, compared to those with breast and colorectal cancer. In addition, patients with stomach cancer had significantly higher scores of HADS-anxiety than those with colorectal cancer, and they did higher scores of HADS-depression than those with breast cancer (Table 5).

Table 5. Differences of the subscales of the Mini-MAC, HADS and FACT-G according to the three cancer types

	Breast (N=74)	Stomach (N=51)	Colorectal (N=39)	
MANCOVA(Wilks' Lambda); F=3.299, df=24, p<0.001				P value
Mini-MAC				
FS	11.4±1.7	11.5±0.8	11.9±1.6	0.189
AP	19.4±4.1	21.0±3.1	19.3±3.5	0.146
FA	14.5±2.4	13.9±1.4	13.6±2.5	0.062
HH	13.4±3.6	15.6±3.2	15.5±3.5	0.001
CA	10.3±2.3	10.1±1.2	10.8±1.9	0.692
HADS				
HADS-A	6.6±3.6	8.1±3.4	5.7±3.1	0.031
HADS-D	6.9±4.1	8.8±3.0	7.2±3.8	0.045
FACT-G				
PWB	21.6±4.9	20.0±2.9	21.0±4.2	0.163
SWB	15.6±6.2	15.3±2.4	15.9±4.8	0.909
EWB	17.2±4.8	16.2±3.5	17.3±4.7	0.713
FWB	17.0±7.1	14.8±4.2	18.3±5.6	0.094
FACT-G-Total	71.4±16.1	70.5±15.8	72.6±13.3	0.913

All tests are two-tailed. The duration of illness and cancer stage were used as covariates. Data are mean±standard deviation values. Mini-MAC: Mini-Mental Adjustment to Cancer scale, HH: Hopeless/Helplessness, AP: Anxious Preoccupation, FS: Fighting Spirit, FA: Fatalism, CA: Cognitive Avoidance, HADS: Hospital Anxiety and Depression Scale, HADS-A: anxiety, HADS-D: depression, FACT-G: Functional Assessment of Cancer Therapy-General, PWB: Physical Well-Being, SWB: Social/Family Well-Being, EWB: Emotional Well-Being, FWB: Functional Well-Being.

3. Regression analysis

For the psychiatric aspects measured by the HADS, the multiple step-wise regression analysis showed that AP, HH and FA of the Mini-MAC and cancer type were significant predictors of the HADS-anxiety and AP, HH accounted for 24% of the variance. In addition, AP, HH and FS of the Mini-MAC explained 46% of the variance for depression dimension of the HADS (Table 6).

Table 6. Results from multiple step-wise linear regression for psychological distress measured by HADS as outcome variables

	Unstandardized Coefficients B	Standardized Coefficients Beta	p-value
HADS-anxiety	Adjusted R^2=0.476, F/p=26.48/0.000		
AP	0.409	0.477	0.000
HH	0.160	0.182	0.012
FA	-0.213	-0.144	0.020
*Cancer Type			
stomach	2.333	0.301	0.000
breast	1.335	0.186	0.013
others	2.478	0.118	0.046
HADS-depression	Adjusted R^2=0.491, F/p=41.55/0.000		
AP	0.398	0.435	0.000
HH	0.264	0.281	0.000
FS	-0.367	-0.160	0.005
*Cancer Type-stomach	1.441	0.174	0.002

*Cancer Type: reference=colorectal cancer. HH: Hopeless/Helplessness, AP: Anxious Preoccupation, FS: Fighting Spirit, FA: Fatalism, HADS: Hospital Anxiety and Depression Scale

For the each domains of quality of life measured by the FACT-G, AP and HH accounted for 14% of the Physical Well-Being dimension of the FACT-G. In addition, lower AP and HH and higher FA predict better quality of life in the domain of Emotional Well-Being. In the domain of Functional Well-Being, AP was also a negative predictor which accounted for 17.2%. The three adjustment styles of AP, HH, and FS were predictors with a 44% for the total score of the FACT-G (Table 7).

Table 7. Results from multiple step-wise linear regression for quality of life measured by FACT-G as outcome variables

	Unstandardized Coefficients	Standardized Coefficients	p-value
	B	Beta	
Physical Well-Being	Adjusted R^2=0.140, F/p=14.66/0.000		
AP	-0.261	-0.248	0.004
HH	-0.207	-0.192	0.026
Social and family Well-Being	Adjusted R^2=0.066, F/p=6.93/0.001		
HH	-0.206	-0.173	0.033
FA	0.324	0.161	0.048
Emotional Well-Being	Adjusted R^2=0.464, F/p=37.31/0.000		
AP	-0.465	-0.443	0.000
HH	-0.232	-0.215	0.004
FA	0.228	0.126	0.042
Duration of illness	0.019	0.186	0.003
Functional Well-Being	Adjusted R^2=0.258 F/p=12.69/0.000		
AP	-0.439	-0.297	0.000
FS	0.672	0.181	0.008
HH	-0.244	-0.161	0.046
*Cancer Type			
stomach	-2.172	-0.162	0.017
others	-5.117	-0.141	0.037
FACT-G-Total	Adjusted R^2=0.441, F/p=45.20/0.000		
AP	-1.466	-1.466	0.000
HH	-1.091	-1.091	0.000
FS	1.818	1.818	0.001

*Cancer Type: reference=colorectal cancer. HH: Hopeless/Helplessness, AP: Anxious Preoccupation, FS: Fighting Spirit, FA: Fatalism, FACT-G: Functional Assessment of Cancer Therapy-General.

IV. DISCUSSION

Our findings indicate that mental adjustment styles in cancer patients play an important role in the psychological morbidity and quality of life. Higher AP and HH subscale scores of the Mini-MAC were closely associated with higher level of anxiety and depression measured by HADS. AP, HH, and FS explained 44% in the model for overall quality of life measured by FACT-G.

In particular, AP was the most potent negative predictor for the Physical, Emotional Well-Being, and Functional Well-Being measured by FACT. In addition, HH was found to have negatively significantly related to poor quality of life over all domains of the FACT-G. Hopelessness seems to have importance as the significant predictor of quality of life. FS, active coping style, positively predicted Functional Well-Being and overall quality of life (FACT-G total scores) and it negatively predicted depression.

These results are consistent with previous research findings. A study for patients with leukemia reported that patients with worse adjustment styles such as hopelessness suffered from severe psychological distress [23]. A longitudinal research showed that the influence of optimism and pessimism on quality of life appears to be mediated by coping strategies in patients with breast cancer [24]. It suggested that the two coping styles of FS and HH may be particularly strong mediators for quality of life.

These coping styles might be important targets for management of distress and quality of life in cancer patients. Our findings suggest that less anxious and less hopeless attitudes and more active coping strategies to fight cancer are related to lower distress and better quality of life. Accordingly, the intervention for increasing active and optimistic coping strategies such as FS and reducing pessimistic attitudes such as HH and AP would be implemented to enhance quality of life during cancer course. A research for intervention of coping in cancer survivors reported that enhancing coping with treatment side

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effects by using coping skills training was associated with the improved quality of life in the physical symptom domains [25]. Group-based cognitive behavior stress management for reducing intrusions and anxiety was reported to be a clinically useful intervention to women treated for breast cancer [26]. Therefore, further research of interventions for better coping styles would be helpful to understand the relationships between coping and quality of life in cancer patients.

On the other hand, CA in cancer patients showed no significant relationship with psychological distress and quality of life. The use of avoidant coping strategies in melanoma patients was reported to be associated with negative cancer outcome such as shorter survival duration in melanoma patients [27]. Another study for gynecologic cancer showed that the use of avoidance was associated with poorer well-being among extensively-treated patients [6]. However, our findings suggest that CA may involve both the adaptive coping strategy to enable the person to escape from a threatening situation and maladaptive aspects to miss chances of problem-solving in Korean. Although CA may sometimes adversely affect quality of life, it may have some adaptive meaning to quality of life in Korean cancer patients.

Among various domains of quality of life, the Physical Well-Being dimension of the FACT-G had week association with mental adjustment styles of AP and HH (Adjusted R^2 for AP and HH = 0.140, p<0.001). On the other hands, the Emotional Well-Being dimension seemed to be strongly influenced by mental adjustment styles of AP and HH (Adjusted R^2 for AP and HH = 0.425, p<0.001). Coping strategies seem to be more closely associated with the emotional dimension of quality of life.

As shown in the Table 5, patients with stomach cancer had significantly higher hopelessness and higher anxiety and depression, compared to other types of cancer in our data. Although significant differences were observed according to cancer types after controlling the

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factors of duration of illness and cancer stage as covariates, other possible confounding factors (e.g., types of treatment, medical prognostic factors) may influence on the relationships between cancer types, coping styles and emotional distress. Therefore, we could not elicit a conclusion from our results concerning whether psychological characteristics such as coping styles are different among types of cancer.

Several limitations should be mentioned. First, the present study was performed as a cross-sectional design. Therefore, we could not find directionality of causality between maladaptive coping styles, psychological distress such as anxiety and depression and various domains of quality of life. Our results cannot determine whether HH or AP contribute to poor quality of life or adverse experience of quality of life cause chronic hopelessness and anxiety. Second, our measures for coping styles and quality of life may be underreported or overreported according to various individual characteristics, because they were based on self-report. Finally, certain factors and conditions that might contribute to quality of life (e.g., social support system, or comorbid conditions such as diabetes) were not analyzed.

V. CONCLUSION

In this thesis, the results showed that mental adjustment styles and coping patterns may be potent predictive factors for various domains of quality of life in patients with cancer. Our findings suggest that less anxious and less hopeless/helpless attitudes and more active coping strategies to fight cancer are related to lower psychological distress and better quality of life. These findings indicate that assessment and intervention of the mental adjustment styles and coping strategies to cancer is essential for reducing psychological sequelae and improving quality of life in patients with cancer. Although our cross-sectional design may not provide the information of causal relationships between certain coping styles, psychological distress such as anxiety and depression and quality of life, it precludes causal conclusions. A longitudinal study which maps the coping patterns in relation to medical status, psychiatric morbidity and quality of life over time will be helpful for determining the impact of patients' coping strategies to cancer.

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< ABSTRACT (IN KOREAN)>

암환자의 대처방식이 삶의 질에 미치는 영향

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암환자의 적응 양상과 대처 방식은 심리적 상태와 밀접한 관련성을 가지며 정신적 건강과 삶의 질에 영향을 준다. 이 연구의 목적은 암환자에서 특정 적응 방식이 정서적 고통과 삶의 질의 각 영역에 영향을 주는지 살펴보고자 한다.

연세암센터에서 외래치료를 받고 있는 169명의 암환자(남자 64, 여자 105)가 연구에 참여하였다. 암에 대한 적응과 대처방식을 평가하기 위해 암환자용으로 개발된 간편형암적응척도(Mini-Mental Adjustment to Cancer scale, Mini-MAC)를 이용하였다. 또한 암환자의 우울, 불안과 같은 정서적 고통을 평가하기 위하여 병원불안우울척도(Hospital Anxiety and Depression Scale, HADS)를 시행하였다. 삶의 질에 대해서는, 암환자에게 특이하게 개발된 Functional Assessment of Cancer Therapy-General(FACT-G) 척도를 이용하여 삶의 질을 신체적, 사회적, 정서적, 기능적 안녕 등의 여러

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영역으로 세분화하여 평가하였다.

　　　Mini-MAC 척도의 불안몰두, 무망감-무조감 항목의 높은 점수는 HADS 로 평가한 우울, 불안 증상과 유의미한 관련이 있었다. 불안몰두는 신체적, 정서적, 기능적 안녕감에 대해서 가장 중요한 예측인자였다. 또한, 무망감-무조감은 FACT-G 척도의 모든 하위 항목의 삶의 질 측면에 대해서 유의미하게 부정적인 삶의 질과 관련되어 있었다. 투지는 기능적 안녕감과 전반적인 삶의 질(FACT-G 총점)에 대해서 긍정적 예측인자였으며 우울에 대해서는 부정적인 예측인자였다. 삶의 질의 여러 영역 가운데, 정서적 안녕감 영역이 특히 불안몰두, 무망감-무조감과 같은 부정적인 대처방식과 강한 상관성을 가졌다(불안몰두와 무망감-무조감에 대한 Adjusted R^2 = 0.425, p<0.001).

　　　이러한 결과는 암환자의 적응 방식이 정서적 고통과 삶의 질에 중요한 역할을 한다는 것을 의미한다. 따라서 암환자의 정서적 고통을 줄이고 삶의 질을 높이기 위해서 적응 방식과 대처 전략에 대한 평가와 개입이 필요하다.

핵심되는 말: 삶의 질, 암, 정신적 적응, 대처, 고통