







## PAPER

# Relationship between physicians' perceived stigma toward depression and physician referral to psycho-oncology services on an oncology/hematology ward

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## Abstract

**Objective:** This study was performed to identify relationships between physicians' perceived stigma toward depression and psycho-oncology service utilization on an oncology/hematology ward.

**Methods:** The study participants were 235 patients in an oncology/hematology ward and 14 physicians undergoing an internal medicine residency training program in Inha University Hospital (Incheon, South Korea). Patients completed the Patient Health Questionnaire-9 (PHQ-9), and residents completed the Perceived Devaluation-Discrimination scale that evaluates perceived stigma toward depression. A total PHQ-9 score of  $\geq 5$  was defined as clinically significant depression. Physicians decided on referral on the basis of their opinions and those of their patients. The correlates of physicians' recommendation for referral to psycho-oncology services and real referrals psycho-oncology services were examined.

**Results:** Of the 235 patients, 143 had PHQ-9 determined depression, and of these 143 patients, 61 received psycho-oncology services. Physicians recommended that 87 patients consult psycho-oncology services. Multivariate analyses showed that lower physicians' perceived stigma regarding depression was significantly associated with physicians' recommendation for referral, and that real referral to psycho-oncology services was significantly associated with presence of a hematologic malignancy and lower physicians' perceived stigma toward depression.

**Conclusion:** Physicians' perceived stigma toward depression was found to be associated with real referral to psycho-oncology services and with physician recommendation for referral to psycho-oncology services. Further investigations will be needed to examine how to reduce physicians' perceived stigma toward depression.

## KEYWORDS

cancer patients, consultation, depression, perceived stigma, physician

## 1 | INTRODUCTION

One-third of cancer patients suffer from mental illness, mainly depressive disorder or anxiety or stress-related disorders.<sup>1</sup> Although cancer patients have a high prevalence of depression, physicians' rate of referral to a psycho-oncologist is less than 10%.<sup>2</sup> This low rate might be because patients and oncologists tend to avoid discussing depression-related issues.<sup>3</sup> In fact, approximately 20% of cancer patients have no interest in discussing their emotional states with a doctor,

and one-third of cancer patients wait for some signal from a doctor before raising the topic.<sup>4</sup> Furthermore, oncologists have a tendency to defer discussions on emotional issues with patients. This reluctance to engage in discussion might be due to lack of time, lack of experience, discomfort with topics such as sexuality, or perceived stigma toward depression.<sup>4</sup>

To promote the emotional counseling of cancer patients, systems that refer patients to psycho-oncology services are important,<sup>4</sup> and suitable referral systems should involve screening for distress. In a

systematic review of the psychological problems of cancer patients, the National Comprehensive Cancer Network recommended routine screening for distress, including depression.<sup>2</sup> Distress among these patients is commonly assessed using the distress thermometer<sup>5</sup> or the Patient Health Questionnaire-9 (PHQ-9).<sup>6,7</sup> Actually, the implementation of referral systems incorporating a screening tool produces several positive outcomes, such as reduced depression, increased doctor-to-patient communication, and the facilitation of referrals to a psycho-oncology service.<sup>8-10</sup>

Factors that impact referral to psycho-oncology service require further investigation. Elis et al suggested sociodemographic variables of cancer patients, such as age, marital status, and level of distress, as possible predictors.<sup>11</sup> However, in addition to patient factors, physician-associated factors should also be identified. Furthermore, because many cancer patients discuss important lifestyle habits with physicians,<sup>12</sup> physicians' attitudes to depression, such as perceived stigma toward depression or psychiatry, are important. For example, Corrigan et al, concluded that the perceived stigma of mental illness is a major barrier to the seeking of psychosocial treatment.<sup>13</sup> In addition, such studies on cancer patients have not been conducted, but there was one study that showed that physicians' stigma affects defining treatment pathways for patients with obesity.<sup>14</sup> However, no study has been undertaken to investigate the effect of physicians' perceived stigma toward depression on referral for such treatment. Accordingly, we considered that if some potential factors could be identified and corrected, referral systems and many cancer patients with psychological distress would be beneficial.

We hypothesized that physicians' perceived stigma toward depression is associated with rate of referral to psycho-oncology services. The objectives of this study were to identify whether age, gender, or cancer-related factors are associated with referrals and to document relationships between physicians' perceived stigma toward depression and psycho-oncology service utilization on an oncology/hematology ward.

## 2 | METHODS

### 2.1 | Participants

This study was performed at an oncology/hematology ward in Inha University Hospital (South Korea). Of the 14 internal medicine residents and 306 admitted cancer patients initially considered, 14 residents and 235 patients participated in this study from May 2015 to October 2015 (a patient participation rate of 76.8%). All 235 patients completed the PHQ-9 on day of admission in the presence of appropriately trained nurses.

All 14 physicians were residents with more than 1 year of experience and a history of 6 years of formal medical training. At the oncology/hematology ward, residents usually act as attending physicians under the supervision of professors of hematology or oncology and are authorized to issue prescriptions, perform examinations, and refer patients for specialist consultation. There were no specific criteria for recruiting doctors, and all 14 doctors working in oncology/hematology wards agreed to participate.

Physicians completed the Perceived Devaluation-Discrimination (PDD) scale<sup>15-17</sup> at study commencement.

The institutional review board of Inha University College of Medicine approved the study protocol. All 235 patients were informed on the purpose and the methods of the study, and all provided written informed consent.

## 2.2 | Measures

### 2.2.1 | Perceived Devaluation-Discrimination Scale

Physicians' perceived stigma toward mental illnesses was assessed using a 12-item scale adapted from the PDD scale,<sup>15,16</sup> which was translated and validated by Lee.<sup>15</sup> This scale measures the degree to which participants believe that a person with a mental illness would be stigmatized were their disorder known.<sup>18-20</sup> Individual responses to questions were scored using a 6-point Likert scale, as follows: strongly agree (1), agree (2), somewhat agree (3), somewhat disagree (4), disagree (5), and strongly disagree (6). Total PDD scores ranged from a minimum of 6 to a maximum of 72. Summed individual scores approximated to a normal distribution, and higher total scores indicated greater perceived stigma.

The PDD was used to assess perceived stigma toward depression. Some words in the psychosis questionnaires, such as "mental patients," "mental disorder," and "mental hospital," were changed to "patients with depression," "depression," and "a hospital to treat depression."<sup>21</sup> For example, the first question was modified to "Most people would accept former patients with depression as close friends."

In this study, because the median score of the PDD was 34, physicians with a PDD score of  $\geq 34$  were classified as having high perceived stigma toward depression. Cronbach's  $\alpha$  coefficient for the depression PDD was .823 in the present study.

### 2.2.2 | Patient Health Questionnaire-9

The PHQ-9 questionnaire is commonly used to screen patients for depression.<sup>6,7</sup> It is composed of 9 items that are designed to check the symptoms of major depressive disorder as defined in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV).<sup>22</sup> The PHQ-9 could be used to evaluate depression according to the fifth edition of the DSM (DSM-5), because the symptom criteria for a major depressive episode in DSM-5 are identical to those in DSM-IV.<sup>23</sup> The Korean version of PHQ-9 has been validated and tested for reliability.<sup>24</sup> Each item was scored from 0 to 3; thus total possible scores ranged from 0 to 27. Scores of 5, 10, and 15 were used as cutoffs for mild, moderate, and severe depression, respectively, as previously described.<sup>6</sup>

## 2.3 | Physicians' recommendation for referral to psycho-oncology services and real referral to these services

Because PHQ-9 scores of  $\geq 5$  indicate the need for support and watchful waiting,<sup>25</sup> and have a screening sensitivity of  $>90\%$  for depression,<sup>7</sup> we defined a total PHQ-9 score of  $\geq 5$  as indicative of depression and required the nurse involved to inform the attending physician of the possible need for referral to psycho-oncology services. After being

informed by a nurse of the patient's condition, the physician responsible decided on referral to psycho-oncology services at his or her discretion; when a patient was not refused to refer, total PHQ-9 score was provided to physician. All patients had the right to refuse referral. Real referral to psycho-oncology services was calculated by subtracting the number of patients who refused physician referral from the number of patients recommended for referral.

## 2.4 | Age, gender, and clinical correlates of participants

Age, gender, diagnosis, cancer stage, and the presence of metastasis were subjected to analysis. Malignancy types were classified as solid tumors and hematologic malignancies. The criteria detailed in the seventh edition of the *American Joint Committee on Cancer Staging Manual* were used for staging.<sup>26</sup> Advanced disease was defined as stage IV disease, relapsed/refractory disease, or a high risk of hematologic malignancy.

## 2.5 | Statistical analysis

The  $\chi^2$  test was used to compare age, gender, type of malignancy, disease stage, and depression severity in patients with or without depression, in depressed patients referred or not by a physician, and in depressed patients recommended for referral that engaged or not with psycho-oncology services. The independent *t* test was used to compare differences between physicians with high and low perceived stigmas with respect to age, gender, and work experience. Analysis of variance was used to compare the mean total PHQ-9 scores of patients who accepted referral, patients who refused referral, and patients with a PHQ-9 score of  $\geq 5$  not recommended for referral.

Logistic regression analysis was used to identify variables associated with referral. Univariable logistic regression analyses were conducted to identify variables associated with physician recommendation for referral and real referral to psycho-oncology services. Variables with a *P* value of  $< .1$  by univariate analysis were subjected to multivariable logistic regression analysis using the backward elimination technique.

The analysis was performed using SPSS version 19.0 (SPSS Inc., Chicago, IL). Statistical significance was accepted for *P* values  $< .05$ .

## 3 | RESULTS

### 3.1 | Age, gender, and clinical characteristics of the patients

Mean age of the 235 patients was 59.8 years (SD = 13.4), and most were married ( $n = 205$ , 87.2%). Male patients constituted 51.9% of the cohort. About one-third ( $n = 78$ , 33.2%) of the patients had a hematologic malignancy, and the most common diagnosis was colorectal cancer ( $n = 40$ , 25.5% of patients with solid tumor). More than 60% had metastasis ( $n = 145$ , 61.7%) and advanced disease ( $n = 179$ , 76.2%). Nearly 60% ( $n = 143$ ) had a PHQ-9 total score of  $\geq 5$ . Proportions with age of younger than 65 years; a hematologic malignancy, metastasis, or advanced disease; and male to female

ratios were similar for nondepressed and depressed patients (Table 1).

### 3.2 | Age and gender of physicians and physicians' perceived stigma toward depression

Five of the 14 internal medicine residents were men. Overall median age was 29 years (range, 27-34 y), and median work experience was 2 years (range, 1.5-3.5 y). Mean physicians' PDD scores were 34.57 (SD = 5.3; range, 30-45). Total PDD scores were not found to be dependent on age, gender, or work experience. Of the 143 depressed patients, 70 were assigned to 7 physicians with a higher PDD score.

### 3.3 | Correlates of physicians' recommended referral and real referral to psycho-oncology services

Of the 143 patients with suspected depression, 87 (60.8%) were recommended for referral and 61 (42.7%) engaged with psycho-oncology services. Of the remaining 82 patients, 56 (68.2%) were not referred to psycho-oncology service by a physician and 26 (21.8%) refused physician referral (Table 2).

Of the 56 patients with suspected depression not referred to psycho-oncology services, 54 (96.4%) were not referred because the physician did not consider they had depression, and the other 2 (3.6%) were not referred because they were in a terminal state. Mean total PHQ-9 scores of the 61 patients who accepted physician referral, the 26 who refused physician referral, and the 56 patients not referred by a physician were similar.

Univariate analysis showed that patients with a hematologic malignancy were more likely to be referred to psycho-oncology services than were those with solid tumor. Female residents were more likely to recommend referral to psycho-oncology service. Physicians' age and lower physicians' perceived stigma toward depression were significantly associated with physician referral and real referral to psycho-oncology services (Table 3).

For multivariate analyses, lower physicians' perceived stigma toward depression was selected in the final model of physicians' recommendation to refer. Lower physicians' perceived stigma toward

**TABLE 1** Age, gender, and clinical correlates of patients according to the presence of depression

	Total	Not Depressed	Depressed	$\chi^2$ (P value)
Age (patients)				
<65	140	55 (59.8)	85 (59.4)	0.003 (0.958)
$\geq 65$	95	37 (40.2)	58 (40.6)	
Gender (patients)				
Male	122	41 (44.6)	81 (56.6)	3.272 (0.070)
Female	113	52 (55.4)	62 (43.4)	
Type of malignancy				
Solid tumor	157	58 (63.0)	99 (69.2)	0.966 (0.326)
Hematologic	78	34 (37.0)	44 (30.8)	
Advance disease				
I-III or low	56	25 (27.2)	31 (21.7)	0.931 (0.334)
IV or high	179	67 (72.8)	112 (78.3)	

**TABLE 2** Physician referral to psycho-oncology services and real referrals

	Total	No Physicians' Recommendation	Physicians' Recommendation	X <sup>2</sup> (P Value)	No Referrals	Real Referrals	X <sup>2</sup> (P Value)
Patient's age							
<65	85	33 (58.9)	52 (59.8)	0.010	45 (54.9)	40 (65.5)	1.660
≥65	58	23 (41.1)	35 (40.2)	(0.920)	37 (45.1)	21 (34.4)	(0.198)
Patient's gender							
Male	81	34 (60.7)	47 (54.0)	0.621	51 (62.2)	30 (49.2)	2.413
Female	62	22 (39.3)	40 (46.0)	(0.431)	31 (37.8)	31 (50.8)	(0.120)
Type of malignancy							
Solid tumor	99	41 (73.2)	58 (66.7)	0.686	63 (76.8)	36 (59.0)	5.210
Hematologic	44	15 (26.8)	29 (33.3)	(0.408)	19 (23.2)	25 (41.0)	(0.022)
Advance disease							
I-III or low	31	13 (23.2)	18 (20.7)	0.128	18 (22.0)	13 (21.3)	0.008
IV or high	112	43 (76.8)	69 (79.3)	(0.721)	64 (78.0)	48 (78.7)	(0.927)
Depression severity							
Mild	72	26 (46.4)	46 (52.9)	0.567	42 (51.2)	30 (49.2)	0.517
Moderate	38	16 (28.6)	22 (25.3)	(0.753)	20 (24.4)	18 (29.5)	(0.772)
Severe	33	14 (25.0)	19 (21.8)		20 (24.4)	13 (21.3)	
Physicians' age							
≤29	76	19 (33.9)	57 (65.5)	13.653*	35 (42.7)	41 (67.2)	8.453*
>30	67	37 (66.1)	30 (34.5)	(<0.001)	47 (57.3)	20 (32.8)	(0.004)
Physicians' gender							
Male	39	21 (37.5)	18 (20.7)	4.854*	23 (28.0)	16 (26.2)	0.058
Female	104	35 (62.5)	69 (79.3)	(0.028)	59 (72.0)	45 (73.8)	(0.809)
Physicians' perceived stigma for depression							
High	70	40 (71.4)	30 (34.5)	18.610*	50 (61.0)	20 (32.8)	11.123*
Low	73	16 (28.6)	57 (65.5)	(<0.001)	32 (39.0)	41 (67.2)	(0.001)

depression was found to be significantly associated with physician referral (odds ratio [OR] = 4.45, 95% confidence interval [CI] 2.17-9.13;  $P < .001$ ). The presence of a hematologic malignancy and lower physicians' perceived stigma were selected in the final model of real referral to psycho-oncology services. Real referral was found to be significantly associated with hematologic malignancy (OR = 3.13, 95% CI 1.40-7.03;  $P < .001$ ) and lower physicians' perceived stigma toward depression (OR = 6.82, 95% CI 2.59-18.00;  $P < .001$ ) (Table 3).

## 4 | DISCUSSION

This report documents for the first time the relationship between physicians' perceived stigma toward depression and referral to psycho-oncology service on an oncology/hematology ward. It shows that higher physicians' perceived stigma toward depression is negatively associated with physician recommendation for referral and with real referral to psycho-oncology services.

The rate of depression (60.1%) among our 235-patient cohort was higher than was that previously reported among Koreans with newly diagnosed cancer (28.8%)<sup>27</sup> or among German cancer patients (24%).<sup>28</sup> We attribute these differences to our adoption of a PHQ score of ≥5 to define possible depression. In the present study, 69 patients (29.3%) had a PHQ-9 score of ≥10, which is slightly higher

than that found in a previous study that used the same criteria<sup>27</sup> and was probably caused by our inclusion of patients with metastatic and advanced disease. Ko et al reported that about 60% of cancer patients had depression in a hospice ward in Korea.<sup>29</sup> However, comparisons are problematic because the prevalence of depression among cancer patients could be affected by physical condition, disease progression, metastasis, and other factors, and thus, prevalence rates should be compared in similar backgrounds.<sup>30</sup>

Referral rate is known to be influenced by oncologist and patient factors.<sup>31</sup> In the present study, about 40% of patients (56/143) with suspected depression were not referred to psycho-oncology services by a physician, and about 30% of patients (26/87) who were recommended for referral refused. These results suggest physician-related factors present more of a barrier to referral than do patient-related factors, which suggests that a focus on physician factors might helpfully promote referral rates.

In this study, 26 patients (about 11% of total patients) refused psycho-oncology services, but unfortunately, the reasons for these rejections were not investigated. As compared with that of a previous study, in which approximately 20% of cancer patients did not discuss their emotional state with physicians, this high percentage of refusals is not excessive. It could be that severity of depression influenced the refusal rate, but we found no difference between the depression severities of patients who accepted referral, patients who refused referral, and patients not referred by a physician ( $F = 1.093$ ,

**TABLE 3** Univariate and multivariate analyses of predictors of physician referral to psycho-oncology services and real referrals

	Physicians' Recommendation for Referral			Real Referrals		
	Odds Ratio	95% CI	P Value	Odds Ratio	95% CI	P Value
Univariate Analysis						
Patient's age						
<65	1.0			1.0		
≥65	0.97	0.49-1.92	0.920	0.64	0.32-1.27	0.199
Patient's gender						
Male	1.0			1.0		
Female	1.32	0.67-2.60	0.431	1.70	0.87-3.33	0.122
Type of malignancy						
Solid	1.0			1.0		
Hematologic	1.37	0.65-2.87	0.408	2.30	1.12-4.75	0.024
Advance disease						
I-III or low	1.0			1.0		
IV or high	1.16	0.52-2.60	0.721	1.04	0.46-2.32	0.927
Depression severity						
Mild	1.0			1.0		
Moderate	0.78	0.35-1.74	0.539	1.26	0.57-2.78	0.567
Severe	0.77	0.33-1.78	0.537	0.91	0.39-2.11	0.826
Physicians' age						
≤29	1.0			1.0		
>30	3.70	1.82-7.51	<0.001	2.75	1.38-5.49	0.004
Physicians' gender						
Male	1.0			1.0		
Female	2.30	1.09-4.87	0.029	1.10	0.52-2.31	0.809
Physicians' perceived stigma for depression						
High	1.0			1.0		
Low	4.45	2.17-9.13	<0.001	3.37	1.67-6.82	0.001
Multivariate Analysis						
Hematologic malignancy	...			3.13	1.40-7.03	0.006
Low physicians' perceived stigma for depression	4.45	2.17-9.13	<0.001	6.82	2.59-18.00	<0.001

$P = .338$ ). Further research is needed to determine why cancer patients decline the use of psycho-oncology services.

In the present study, the only clinical correlates found to be associated with real referrals to psycho-oncology service were the presence of a hematologic malignancy. Ellis et al reported that age, marital status, and levels of distress in patients with a solid tumor possibly predicted referral.<sup>11</sup> However, these variables were not identified in other studies on distress screening systems, possibly owing to a lack of documented referrals.<sup>10,32</sup> Furthermore, few studies have addressed the relationship between quality of life of cancer patients and referral. Weaver et al reported that patients with a hematologic malignancy had poorer health-related quality of life than had patients with breast cancer.<sup>33</sup> Thus, it appears that because patients with a hematologic malignancy may consider referral more favorably, real referral to psycho-oncology services was found to be associated with the presence of hematologic malignancy in the present study. Furthermore, our results suggest the need for studies on referral rates for different types of cancer.

Univariate analysis showed that physicians' age was related to physician referral and real referral to psycho-oncology services, and that physicians' gender was related to physician referral, but these

relations failed to withstand multivariate analysis. In a previous study, physicians' age and gender did not influence attitudes toward psychiatric consultation.<sup>34</sup> The present study is limited on this count because only 14 physicians were enrolled and all were residents. Thus, we suggest that a large-scale study be conducted to determine the influences of physician age, sex, and medical experience.

In the present study, severity of depression was not found to be related to physician referral or real referral with psycho-oncology services by univariate or multivariate analyses. In a previous study, it was reported that severity of depression was associated with physician referral to psycho-oncology services but not to real referral.<sup>35</sup> In another study, oncologist-assessed depression was found to be mainly dependent on patient medical correlates, regardless of the presence of depression or its severity, and these findings were considered to reflect the inability of oncologists to diagnose depression.<sup>36</sup>

In the present study, it was an important result that physicians' perceived stigma was associated with real referral as well as physicians' recommendation for a referral to psycho-oncology services. It has been suggested that stigmatizing attitudes of physicians could restrict access to psychiatric care, lead to undertreatment,<sup>37</sup> weaken relationships between patients and psychiatrists,<sup>38</sup> and constitute an

important barrier to the receipt of appropriate treatment for depression.<sup>13</sup> Thus, despite the introduction of systems that refer cancer patients to psycho-oncology services, such efforts could be in vain if physicians' perceptions of depression do not change. Therefore, to increase referrals of cancer patients with depression, we suggest physicians be educated on the subject.<sup>39,40</sup>

#### 4.1 | Clinical implications

To promote counseling of the emotional conditions of cancer patients, physicians' perceived stigma regarding psychological cooperation requires further investigation. High perceived stigma toward depression by physicians could reduce physician referral and rates of real referral with psycho-oncology services.

#### 4.2 | Study limitations

Several limitations of the present study deserve consideration. First, PDD was developed for use by patients, families, and community members, and its appropriateness for physicians has not been determined. Although instruments like the Opening Minds Scale for health care providers<sup>41</sup> could be applied to doctors, it was not used in this study because this scale has not been standardized in Korea. Second, the results of this study could not be applied to all cancer patients, because >30% of our patients had a hematologic malignancy and more than 70% had high-grade cancer. Third, no effort was made to investigate diverse confounding factors of depression, such as pain, performance status, duration of cancer, or history of cancer treatment.<sup>36,42</sup> Fourth, we did not examine the quality of doctor-patient communication, which might have importantly influenced the willingness of physicians to refer.<sup>3</sup> Fifth, patient perceived stigma toward depression was not investigated, and this has been shown to adversely affect mental health service use.<sup>43,44</sup> Finally, as was mentioned above, only a relatively small number of physicians were recruited, and thus, we suggest that a larger-scale study needs to be conducted to confirm our findings.

### 5 | CONCLUSION

Despite its limitations, the present study suggests physicians' perceived stigma toward depression could restrict referrals and real referral to psycho-oncology services. Further investigations are needed to determine how educating physicians and increasing their awareness of depression affects physician referral rates to psycho-oncology services and patient acceptance of these services.

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#### CONFLICT OF INTERESTS

The authors have no conflict of interest to declare.

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