

# Application of Social Support and Social Support Utilization for Chronic Diseases Patients Who Have Depression

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**Abstract:** Objective: To evaluate application of social support and social support utilization for chronic diseases patients who have depression. Methods: 485 patients who were diagnosed as one of 6 chronic diseases, that include diabetes mellitus, stroke, coronary heart disease, malignant tumor, chronic kidney disease or chronic obstructive pulmonary disease were invested to join our study. Their diagnosis of time is from January 2018 to July 2018, and they also suffered from depression during the follow-up period. We used the questionnaires to collect the information from patient, such as patient health questionnaire 9 (C-PHQ-9) which is base on Multidimensional Scale of Perceived Social Support (MSPSS). Result: In all patient characteristics research, the incidence of depressive symptoms was 42.3%, it includes 101 cases of mild depression (49.3%), 62 cases of moderate depression (30.2%) and 42 cases of severe depression (20.5%). Some domains can influence depression in the life, they are education level, course of illness, monthly average medical expenses and self-care ability of patients with chronic depression and non-depression. In addition, some domains are statistical significance in the result, that include total score of social support utilization, perceived friend support, perceived other support, total score of perceived social support, perceived voluntary support, perceived professional support and perceived friendship support. Conclusion: The social support has strongly improvement to depression status of chronic diseases patients. Higher social support utilization improves the patients to better depression situation.

**Keywords:** Social Support, Chronic Diseases, Depression

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## 1. Introduction

Depression is a heterogeneous psychiatric disorder that is often as-associated with other diseases. chronic diseases can contribute to onset of depression as the psychological adjustment to chronic illnesses can be highly challenging [1]. Base on the report, these associations which between chronic diseases and depression appear to be bidirectional: people with depression have an in-cresed risk of several chronic conditions, such as diabetes, cardiovascular disease, cancer and stroke [2]. In worldwide, about 350 million people were affected by depression, there had 3%–16.9% lifetime prevalence. It accounts for 7.5% of years lived with disability worldwide, which is the largest contributor to nonfatal health loss [3, 4]. In 2016, the Survey of Mental Disorders in Korea

shown the lifetime prevalence of mental disorders disease in South Korea is 5.0%, and the 12-month prevalence is 1.5% [5]. In recent report, patients with depression often have comorbid conditions, the comorbid conditions included diabetes, arthritis, asthma, chronic obstructive pulmonary disease, heart disease and hypertension [6]. It is a bidirectional relationship between depression and chronic diseases.

Strong social support, in the form of intimacy, affection, and assistance, has been consistently found to protect against negative mental health outcomes, including depression and anxiety [7]. In social support, it had many channels to communication, such as in-person interactions, such as with family members, significant others and friends. Additionally, social support can also be provided through other communication platforms, such as the Internet and social media, although findings have been mixed with regard to the

value of such mediated support [8, 9]. Social support is defined as instrumental, informational, affiliative, and emotional support obtained through an individual's social network [10]. A lack of social support is associated with poor health outcomes including increased mental health problems, chronic disease burden and mortality [11]. Aim of this study is that evaluate application of social support and social support utilization for chronic diseases patients who have depression.

## 2. Methods

### 2.1. Participants Enrollment and Survey Methods

485 patients who were diagnosed as one of 6 chronic diseases, that include diabetes mellitus, stroke, coronary heart disease, malignant tumor, chronic kidney disease or chronic obstructive pulmonary disease were invited to join our study. Their diagnosis of time is from January 2018 to July 2018, and they also suffered from depression during the follow-up period. The collected information includes depression status, patient basic information, interpersonal relationship and assessment of social support. In addition, we used the following questionnaires: patient health questionnaire 9 (C-PHQ-9) which is based on The Diagnostic and Statistical Manual of Mental Disorders – IV (DSM-IV), it is similar with Hamilton depression rating scale (HAMD) [12-14]. Additionally, we use the Xiuling Zhou's social support utilization scale to measure the social support utilization of participants [20].

Their inclusion criteria were: (1) the patients were diagnosed as one of 6 chronic diseases; (2) The participant had depression in follow-up; (3) Patients volunteered to participate the study; (4) Primary school education or above. Their withdrawal criteria were: (1) Inability to communicate

effectively and Severe mental illness; (2) The illness status is too serious.

### 2.2. Statistical Analysis

Our data analyzer performed the statistical analysis by SPSS 22.0. The P value, t-test and chi-square test were associated with collection result were analyzed. Besides, the mean standard deviation for statistical description.

## 3. Result

In Table 1, it shows the depression situation of patient in the study, there is 205 out of 485 patients with chronic diseases. Overall, the incidence of depressive symptoms was 42.3%, it includes 101 cases of mild depression (49.3%), 62 cases of moderate depression (30.2%) and 42 cases of severe depression (20.5%).

*Table 1. Depression Status of participants.*

Projects	Cases (n)	Percent (%)
Non-depressive mood	280	57.7
Depressed mood	205	42.3
mild	101	20.8
moderate	62	12.8
severe	42	8.7

Based on Table 2, some domains of patient characteristics are statistically significant. Those are education level, course of illness, monthly average medical expenses and self-care ability of patients with chronic depression and non-depression. Other domains are not statistically significant, it shows the patients have similar characteristics on gender, age and income between Non-depressive mood group and Depressed mood group.

*Table 2. Patient characteristics in Non-depressive mood group and Depressed mood group.*

Projects	Non-depressive mood group	Depressed mood group	$\chi^2$	P Value
Gender (Male)	129	181	0.697	0.069
Gender (Female)	76	99		
Age (<45 years old)	25	26	7.098	0.069
Age (45~years old)	56	78		
Age (60~years old)	83	140		
Age ( $\geq$ 75 years old)	41	36		
Unemployment (n)	81	104	0.596	0.616
No unemployment (n)	124	176		
Family monthly income (<2000)	15	21	4.988	0.112
Family monthly income (2000~)	31	30		
Family monthly income (5000~)	89	108		
Family monthly income (10000~)	70	121		
Completely Self-sufficient	81	215	70.461	0.000
Partial Self-sufficient	91	52		
In Need of Great Help	26	9		
Totally Dependent	7	4		
Average monthly medical expenses (<2000)	103	193		
Average monthly medical expenses (2000~)	37	34		
Average monthly medical expenses (5000~)	28	24	-	-
Average monthly medical expenses (10000~)	37	29		

The Table 3 include 10 domains in our research result, they indicate the social support situation of participants and their social support utilization. Overall, a part of domains is statistical significance in the result, that include total score of

social support utilization, friend support, other support, total score of perceived social support, obligation support, professional support and friendship support.

*Table 3. Social support score in Non-depressive mood group and Depressed mood group.*

Projects	Family support	Friends support	Other support	Social support	total score of perceived social support
Depressed (n = 205)	5.81±0.95	4.24±1.41	4.58±1.49	4.88±1.03	1.83±0.45
Non-depressive (n = 280)	5.84±0.91	4.65±1.34	4.91±1.21	5.12±0.99	1.99±0.42
t	0.330	0.332	0.269	4.186	3.854
P value	0.742	0.001	0.007	0.000	0.00

*Table 3. Continued.*

Projects	Obligation support	Friendship support	Professional support	Moral support	Social support utilization
Depressed (n = 205)	1.62±0.48	1.31±0.43	1.77±0.67	1.67±0.33	5.81±0.95
Non-depressive (n = 280)	1.75±0.50	1.41±0.48	1.88±0.64	1.79±0.34	5.84±0.91
t	2.736	2.477	1.773	2.594	0.330
P value	0.006	0.014	0.077	0.010	0.742

## 4. Discussion

Social support is generally defined as the provision of aid by various social network members. A large body of literature suggests higher level of social support may mitigate or “buffer” the maladaptive behavioral outcomes among individuals exposed to stress, such as alcohol use disorder and substance abuse [15]. In recent report, social support buffering against negative mental or behavioral health outcomes has examined the construct from different aspects, including objective support, subjective support and source of support [16]. A report shown that greater subjective support buffers the negative health outcomes among individuals exposed to traumatic events or greater psychosocial stressors [17]. However, Carnford’s report indicate that objective support seems to have no buffering effect or even have negative effect on mental health [18]. In addition, although objective social support may enhance the coping effect through provision of practical resources, this type of support can also create indebtedness and guilt which deteriorates the psychosocial distress of the support receivers and therefore reduces its potential of stress buffering [19].

Base on above research result, the social support has strongly improvement to depression status of chronic diseases patients. Higher social support utilization improves the patients to better depression situation. In particular, some domains can efficiency improve the mental health of patient in social support, it includes total score of social support utilization, friend support, other support, total score of perceived social support, obligation support, professional support and friendship support. Additionally, some factors of life exacerbate depression, such as education level, course of illness, monthly average medical expenses and self-care ability. In limitation, the study has other influence factors which can affect the result of research, but we have not plan to analyze the factors and exclude them. Additionally, the depression situation of participant lacks more

detailed assessment, we only distinguish them in 3 level from general identification.

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