

Original article

Social functioning and associated social skills in patients with depressive disorder in Psychiatric Outpatients, King Chulalongkorn Memorial Hospital

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Background: Previous study have shown that 68.0% of patients with depressive disorder had social functioning impairment. The impaired social skills of these patients also affected the patients' daily lives. However, there were limited studies concerning on social functioning, social skills and associated factors of patients with depressive disorder.

Objectives: This study aimed to investigate social functioning, social skills, and associated factors of patients with depressive disorder.

Methods: We recruited 150 patients from June to December 2019, aged above 18 years old, assessed: 1) Demographic data form; 2) Beck Depression Inventory-II (BDI-II) - Thai Version; 3) Social Skills Inventory; 4) Interpersonal Reactivity Index; and 5) Social Functioning Questionnaires (SFQ) – Thai Version, and the investigator completed the medical record form. The association between social skills, impaired social functioning and associated factors was analyzed.

Results: Most patients with depressive disorder were young female. Ninety – eight patients (65.3%) had impaired social functioning. Fifty – three patients (35.3%) had social skills deficits. The associated factors of impaired social functioning were: having physical illnesses ($P < 0.05$), severe level of depression ($P < 0.01$), and very low-to-low level of social skills ($P < 0.01$). The domains of social skills associated with the impaired social functioning were low emotional sensitivity, low social expressivity, and low social control ($P < 0.05$). The predictors of impaired social functioning were having a physical illness ($P < 0.01$), severe depression ($P < 0.01$), and very low to low of social skills ($P < 0.01$).

Conclusion: Most patients with depressive disorder had impaired social functioning. Having physical illnesses, very low-to-low level of social skills and severe depression were associated with the patients' impaired social functioning. The enhancement of patients' social skills and social functioning should help reducing their depressive symptoms.

Keywords: Depressive disorder, social functioning, social skills.

Depressive disorder was one of the common psychiatric disorders with a lifetime prevalence of 5 to 17⁽¹⁾, ranked as one of the leading causes of disease burden and might become the first disease of burden in 2030. ⁽²⁾ Accounting for 4.5% of total disability-adjusted life-years (DALYs), and for 12.1% of total years lived with disabilities (YLDs) in 2000. In Thailand⁽³⁾, the lifetime prevalence of depressive

disorder is about 5.7 - 20.9%. Depressive disorder has shown many contributing factors, biological, psychological and social. ^(4 - 7) Regarding the social factors, adverse life events, lack of social skills, and social isolation are recognized as the precipitating and maintaining factors of depressive disorder, leading to the social and relation psychotherapies such as interpersonal psychotherapy and social skills training that enhancing patients' better social skills and functioning.⁽⁸⁾

The social functioning is the capability of person to properly perform in several social roles; for examples, the ability to recognize and empathize others' feelings, the distinct communication with others, the social activities participation, and also the ability of

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adaptation in working and daily life. The deficits of social functioning and social skills lead to difficulties in the social activities participation and encountering the stressful life event. The impairment of social functioning is usually found in patients with depressive disorder by the result of severity and chronicity of illness. These impairments decrease the patients' abilities to express their feelings and needs, and the patients' potential of making interpersonal relation.⁽⁹⁾ The impaired social skills and functioning also affects the patients' daily life such as studying, working, and living as the member of family and society. These defects also adversely affect the patients' long-term relationships regardless of formerly or newly, leading to the decrease of patients' social support. All above results in the higher severity and longer duration of illness, more chronicity, and higher recurrence.⁽¹⁰⁾

The previous studies showed that 43.3% of patients with depressive disorder had the social functioning impairment, characterized by inefficient emotional expression and avoidance of social participation due to their fear of others' criticisms and rejections. The socially impaired patients are not ventured to protect their own rights and miss their opportunities to achieve their need and end up with their feelings of helplessness. The patients also lack motivation to be the part of their societies.⁽¹¹⁾ Concerning social functioning, the severity of depressive symptoms might cause social skills and social functioning deficits, and vice versa, the impaired quality of patients' social relation worsens their symptoms.

Although the studies regarding the social functioning of patients with depressive disorder showed that most patients had impaired social functioning, there were still limited studies in Thailand concerning social functioning of depressed patients. Therefore, this study aimed to examine the social functioning and associated social skills in patients with depressive disorder at the Psychiatric Outpatient Department, King Chulalongkorn Memorial Hospital. The results will be useful to develop the program for improving social functioning and social skills in depressive disorder patients afterward.

Materials and methods

One hundred and fifty patients aged above 18 years old, diagnosed as depressive disorder by psychiatrists or psychiatric residents using the DSM-5 criteria from Psychiatric Outpatient Department, King Chulalongkorn Memorial Hospital were

recruited. The inclusion criteria were major depressive disorder, persistent depressive disorder or dysthymia and double depression or major depressive disorder with dysthymia. The exclusion criteria were: patients with severe depressive disorder with psychotic symptoms, schizophrenia and others psychotic disorder, bipolar disorder, dementias, organic mental disorder and also substance-induced mood disorder. The approval for the study was obtained from the Institutional Review Board (IRB), Faculty of Medicine, Chulalongkorn University (IRB. no. 259/63). All subjects were informed about the objectives and method of the study. They voluntarily participated in the study by giving their informed consents. The subjects were recruited from June to December 2019. The subjects completed five questionnaires: 1) Demographic data form; 2) Beck Depression Inventory-II (BDI-II) Thai Version; 3) Social Skills Inventory; 4) Interpersonal Reactivity Index; and 5) Social Functioning Questionnaires (SFQ)-Thai Version, and the investigator completed the medical record form.

Beck Depression Inventory-II (BDI-II)⁽¹⁰⁾ Thai Version⁽¹¹⁾, was used for evaluating the level of depressive disorder severity, was translated and developed by Thaivachachart N, *et al.* It was already tested and found to have good validity and reliability (Cronbach's alpha coefficient = 0.91). The Spearman's correlation efficient between BDI-II and Hamilton Rating Scale for Depression (HRSD) is 0.71. BDI-II is composed of 21 items and had range of score from 0 to 63. The score of 13 and lower represents minimal depression; 14 to 19 represents mild depression; 20 - 28 represent moderate depression; and 29 to 63 represents severe depression.

Social Skills Inventory was developed by Klomklieng D.⁽¹²⁾ from the Riggio RE's⁽¹³⁾ concept of social skills. It is composed of 66 items used for evaluation of social skills, categorized in 6 domains, namely: 1) emotional expression (9 items), 2) empathy sensitivity (9 items), 3) emotional handling (12 items), 4) social expression (12 items), 5) social empathy (12 items), and 6) social handling (12 items). The range of score is from 0 to 132. The score 58 and lower represents very low social skills; 59 to 71 represents low social skills; 72 to 86 represents moderate social skills; 87 to 100 represents high social skills; and 101 to 132 represents very high social skills. It was already tested and found good reliability (Cronbach's alpha coefficient = 0.88).

Interpersonal Reactivity Index (IRI) – Thai version⁽¹⁴⁾, translated and adapted by Chotitham S., was used for assessing the ability to recognize others' feelings. It is composed of 12 items. The range of score is 12 to 60. The score 12 or 28 represents low empathy; 29 to 42 represents moderate empathy and 43 to 60 represents high empathy. It was already tested and showed good reliability (the Cronbach's alpha coefficient is 0.89).

Social Functioning Questionnaires (SFQ) - Thai version⁽¹⁵⁾ was used to evaluate person's social functioning. It was developed from the concept of Tyrer P, *et al.*⁽¹⁶⁾, and was translated and adapted into Thai version by Junnim V, *et al.*⁽¹⁵⁾. It is composed of 8 items. The range of score varies from 0 to 24. High scores of SFQ indicate low social functioning. The impaired social functioning indicated by the SFQ scores of 10 and higher. It was already tested and showed good reliability (the Cronbach's alpha coefficient is 0.96).

The data analysis was performed by using IBM SPSS Statistic program version 20. The baseline demographics, severity of depression, social skills level, empathy, and social functioning were presented by number and percentage (with mean and standard

deviation (SD)). Chi-square test was used to analyze the association between impaired social functioning and the associated factors. Logistic regression was performed to identify the predictors of impaired social functioning. $A \leq P 0.05$ considered statistically significant.

Results

There were 150 patients with depressive disorder who participated in this study, aged 18 – 64 years (mean age = 28.0 years, SD = 8.6). Most of them (110 patients, 73.3%) were female. One hundred and eighteen subjects were single (78.7%); 20 (21.3%) were couples and 12 (8.0%) were separated, widowed or divorced. Most of them (99.4%) were educated, and 119 patients (79.4%) had Bachelor's Degree or higher, and nearly 70.0% of the subjects were employed (92 subjects). More than half of them had an income for 10,000 baht per month or above, and 124 subjects (82.7%) had sufficient incomes. Sixty-seven patients (44.7%) had the history of substance use. Forty-four participants (29.3%) had the family history of mental illnesses, and 55 (36.7%) had the physical illnesses. The demographic characteristics of the subjects are shown in Table 1.

Table 1. Demographic characteristics of patients with depressive disorder (n = 150).

Demographic characteristics	N (150)	Percentage
Gender		
Female	110	73.3
Male	40	26.7
Age (years)		
≤ 30	106	70.7
31 – 40	32	21.3
41 – 50	5	3.3
51 – 60	6	4.0
≥ 61	1	0.7
Mean ± SD = 28.0 ± 8.6, min, max = 18, 64		
Marital status		
Single	118	78.7
Couple	20	13.3
Separated	10	6.7
Widowed	1	0.7
Divorced	1	0.7
Educational level		
Uneducated	1	0.7
Elementary school and high school	19	12.7
High vocational, and vocational certificate	11	7.3
Bachelor's degree, and higher	119	79.4

Table 1. (Con) Demographic characteristics of patients with depressive disorder (n = 150).

Demographic characteristics	N (150)	Percentage
Occupation		
Unemployed	58	38.7
Employee	39	26.0
Business owner	30	20.0
Government officer, and state enterprises	19	12.7
Laborer	4	2.7
Average income (THB/month)		
Lower than 10,001	62	41.3
10,001 – 30,000	61	40.7
30,001 and higher	27	18.0
Mean = 22,844.6, SD = 34,864.1, min, max = 0, 300,000		
Financial adequacy		
Sufficient and saving	69	46.0
Sufficient and non - saving	55	36.7
Insufficient and saving	8	5.3
Insufficient and non - saving	18	12.0
Substance use (cigarette, alcohol and others)		
Yes	67	44.7
No	83	55.3
Family history of mental illnesses		
No	106	70.7
Yes	44	29.3
Having a physical illnesses		
No	95	63.3
Yes	55	36.7

Regarding the depression severity, 27 patients (18.0%) had minimal depression, 14 (9.3%) mild depression, 31 (20.7%) moderated depression, and 78 (52.0%) severe depression, with the mean score = 28.1 ± 13.4 . About the social functioning, 98 subjects (65.3%) had the impaired social functioning with the mean scores = 11.4 ± 4.1 . Concerning the social skills, there were 24 (16.0%) who had very low level

of social skills, 29 (19.3%) low, 47 (31.3%) moderate, 32 (21.3%) high, and 18 (12.0%) very high level. Looking into the domains of social skills, all 6 social skills domains, namely: emotional expressivity, emotional sensitivity, emotional control, social expressivity, social sensitivity, and social control; they were in the moderate level (Tables 2 - 3).

Table 2. The severity of depression, social functioning, empathy, and social skills of patients with depressive disorder.

Variables	N (150)	Percentage
Severity of depression		
Minimal (0 - 13)	27	18.0
Mild (14 - 19)	14	9.3
Moderate (20 - 28)	31	20.7
Severe (29 - 63)	78	52.0
Mean = 28.1, SD = 13.4, min = 1, max = 54		
Social skills		
Very low (0 - 58)	24	16.0
Low (59 - 71)	29	19.3
Moderate (72 - 86)	47	31.3
High (87 - 100)	32	21.3
Very high (101 - 132)	18	12.0
Mean = 78.2, SD = 18.9, min = 22, max = 125		

Table 2. (Con) The severity of depression, social functioning, empathy, and social skills of patients with depressive disorder.

Variables	N (150)	Percentage
Empathy		
Low (12 - 28)	2	1.30
Moderate (29 - 42)	40	26.70
High (43 - 60)	108	72.00
Mean = 46.1, SD = 6.6, min = 24, max = 60		
Social functioning		
Impaired (10 - 24)	98	65.3
Normal (0 - 9)	52	34.7
Mean \pm SD = 11.4 \pm 4.1, min = 0, max = 21		

Table 3. The social skills domains of patients with depressive disorder.

Domains of social skills	N (150)	Percentage	Domains of social skills	N (150)	Percentage
1) Emotional expressivity Mean \pm SD = 9.5 \pm 3.8			4) Social expressivity Mean \pm SD = 12.9 \pm 5.7		
Low (< 5.7)	19	12.7	Low (< 7.2)	31	20.7
Moderate (5.7 - 13.3)	112	74.7	Moderate (7.2 - 18.7)	95	63.3
High (> 13.33)	19	12.7	High (> 18.7)	24	16.0
2) Emotional sensitivity Mean \pm SD = 13.3 \pm 3.5			5) Social sensitivity Mean \pm SD = 17.4 \pm 2.8		
Low (< 9.8)	25	16.7	Low (< 14.6)	22	14.7
Moderate (9.8 - 16.7)	95	63.3	Moderate (14.6 - 20.2)	111	74.0
High (> 16.7)	30	20.0	High (> 20.2)	17	11.3
3) Emotional control Mean \pm SD = 12.6 \pm 4.8			6) Social control Mean \pm SD = 12.3 \pm 5.4		
Low (< 7.8)	21	14.0	Low (< 6.9)	27	18.0
Moderate (7.9 - 17.4)	108	72.0	Moderate (6.9 - 17.8)	97	64.7
High (> 17.4)	21	14.0	High (> 17.8)	26	17.3

Regarding the association between the impaired social functioning and the associated factors, the associated factors of social functioning impaired were having physical illnesses ($P < 0.05$), severe level of depression ($P < 0.01$), very low – to - low level of social skills ($P < 0.01$). The domains of social skills associated with the impaired social functioning

were low emotional sensitivity ($P = 0.03$), low social expressivity ($P = 0.04$), and low social control ($P = 0.17$) (Tables 4, 5).

By logistic regression, the remaining predictors of impaired social functioning were having physical illness ($P < 0.01$), severe depression ($P < 0.01$), and very low to low of social skills ($P < 0.01$) (Table 6).

Table 4. The association between the impaired social functioning and the associated factors.

Factors	Social functioning				P - value
	impaired N	%	normal N	%	
Age (years)					
Lower than 30	73	68.9	33	31.1	1.0
30 and above	25	56.8	19	43.2	
Having physical illnesses					
Yes	43	78.2	12	21.8	0.01*
No	55	57.9	40	42.1	
Severity of depression					
Minimal to moderate	31	43.1	41	56.9	< 0.001**
Severe	67	85.9	11	14.1	
Social Skills					
Very low to low	46	86.8	7	13.2	< 0.001**
Moderate to very high	52	53.6	45	46.4	
Empathy					
Low to moderate	28	66.7	14	33.3	0.83
High	70	64.8	38	35.2	

* $P < 0.05$, ** $P < 0.01$

Table 5. The association between the impaired social functioning and the domains of impaired social skills.

Factors	Social functioning				P - value
	Impaired		Normal		
	N	%	N	%	
Social skills					
Emotional expressivity	15	78.9	4	21.1	0.18
Emotional sensitivity	21	84.0	4	16.0	0.03*
Emotional control	16	76.2	5	23.8	0.26
Social expressivity	26	80.6	6	18.4	0.04*
Social sensitivity	17	77.3	5	22.7	0.20
Social control	23	85.2	4	14.8	0.02*

* $P < 0.05$ **Table 6.** Predictors of social functioning deficits in patients with depressive disorder.

Variables	β	Adjusted Odds Ratio (OR)	95% CI of Adjusted OR		P - value
			Lower	Upper	
Having a physical illness	1.28	3.61	1.49	8.76	0.005*
Severe depression	2.00	7.31	3.01	17.26	<0.001*
Very low-to-low level of social skills	1.37	3.92	1.47	10.46	0.006*

* $P < 0.01$

Discussion

From the demographic characteristics, most of depressive disorder patients in the present study were young female patients. Most of them had the Bachelor's Degree or higher. They had the average incomes about 20,000 baht per month and had sufficient financial status. Forty-four subjects had family history of mental illnesses, and fifty - five) had physical illnesses. Sixty-seven patients had the history of substance use. Regarding the patients' depression severity, most of them had moderate-to-severe depression. Concerning the social functioning, most of them had impaired social functioning. The result of this study was similar to the previous study of Junnim V, *et al.*⁽¹⁵⁾, that also found the patients with depressive disorder had impaired social functioning. From the previous study the impaired social functioning was found about 43.0%. Regarding the present study, the result of social functioning impairment was higher (65.3%) because of most of the subjects were patients with severe depression. According to the previous studies of social functioning in population by using Tyrer's SFQ⁽¹⁶⁾, the mean scores of social functioning in population was 4.6. The scores of 10 or higher indicated poor social functioning. Among psychiatric patients, the patients with severe psychiatric disorder

and patients with psychiatric emergency conditions had high scores on SFQ. This was in concordance to the findings in the present study that showed patients with moderate-to-severe depression had marked impairment in social functioning. Kupferburg A.⁽⁹⁾ explained that the impairment of social functioning in depressed patients was caused by their depressive symptoms. Besides, the severity of depressive symptoms leads to the impairment of social functioning, the chronicity of depressive disorder also worsens the patients social functioning.

Regarding the social skills of patients with depressive disorder, this study found that most of patients had moderate level of social skills. All six domains of patients' social skills were also in moderate level. This result of this study was similar to that of Kurimoto P, *et al.*⁽¹⁷⁾, which also showed depressed patients had moderate level of social skills, and the six domains of social skills were in moderate level as well.

Concerning the factors associated to the impaired social functioning, these factors in this study included having a physical illness, severe depression, and very low-to-low social skills. These three factors were also the remaining predictors of impaired social functioning of patients with depressive disorder.

According to the study, having the physical illnesses was associated with social functioning impairment. The depressive disorder patients with the physical illnesses were associated with the feeling of helplessness.⁽¹⁸⁾ From the study of Yotthongdi N.⁽¹⁸⁾, the association between the feeling of helplessness in depressive disorder patients with the physical illnesses was statistically significant. The feeling of helplessness lead to the severity of depression which disturbed the daily life, both routine and functioning.

The patients might be burdened in several social functioning: self-care and hygiene, daily function in living or working or to participated in group or society. All these limited the patients from having good interpersonal relation or social supports. The less participation and contact with society lead to the more impaired social functioning.

Regarding social skills, very low-to-low level of social skills was associated with impaired social functioning. Social functioning is a person's abilities to work and do their home activities, to attend to self-care, to engage in family and social relationships, and to participate in social, recreational, and community activities.

In order to perform these roles, the person's high social skills are needed. Because the social skills are person's skills assets that are used to relate and communicate with others, build up and maintain relationships, manage with interpersonal problems, participate in group and social activities or societies, enhance/promote social support, resulting in the well living adjustment.

Patients with depressive disorder have impaired social skills in communicating their needs, interacting with others, diminished social cooperativeness, and adjusting themselves when encountering stressful situation, leading to the worsening of their social functioning. In this study, the domains of social skills associated with impaired social functioning were low emotional sensitivity, low social expressivity, and low social control. According to Kupferburg A.⁽⁹⁾ concept, the impairment of social functioning in depressed patients was associated with their impaired social skills. The low emotional sensitivity means the patients' impaired emotion recognition and mood-congruent emotional bias. This affects the patients' reduced empathy.

The social expressivity is the person's ability in communication, interpersonal relation, and participation in social conversation. The patients' low social expressivity results in the inability to properly

express their emotions or needs and ends with being unable to control their lives. The social control is the attributes in acting properly on the social roles or controlling person's expression. The deficits on social control lead to diminished social cooperativeness, that leads the patients not being able to work or live with others in their social roles. When they are unable to fit in or live as the members of their societies, they may feel social rejected and isolated.

Regarding the severity of depression that was associated with impaired social functioning, the depressive symptoms by itself decrease interpersonal relations and social functioning by social anhedonia, reduced empathy, fear of others' rejection, social avoidance, and diminished social cooperativeness. The depressive disorders also lower the patients' social skills level, and lessen the patients' participating in societies, because of lacking the expressive and receptive social skills. Lack of these features affects the patients' self-confidence, problems solving, and abilities in social communication and finding social support.⁽¹⁹⁾ According to Kurimoto P, *et al.*⁽¹⁷⁾ study, the deficits of depressed patients' social skills were affected by the severity of depression as well. This was consistent with the results of present study showing that the severity of depression and very low-to-low social skills were associated with the impaired social functioning.

From this study, the patients with depressive disorder had decreased social skills and impaired social functioning. Enhancing the patients in learning helpful social skills through social skills training program or interpersonal psychotherapy might help them to solve their interpersonal problems, increase their social functioning, and increase their social support, leading to better their adjustment in societies.

This study was conducted in Psychiatric Outpatient Department, King Chulalongkorn Memorial Hospital, and most subjects were female in young ages. The interpretation and application of the findings in this study should be considered by this context. Besides, this study is a descriptive study that may not show the causes or risks of patients' social functioning impairment.

Conclusion

Sixty-five point three percent of patients with depressive disorder had impaired social functioning. Most of them had moderate level of social skills. The factors associated with impaired social functioning were having the physical illnesses, severe level of

depression, very low-to-low level of social skills. The domains of social skills associated with the impaired social functioning were low emotional sensitivity, low social expressivity, and low social control. The predictors of impaired social functioning were having a physical illness, severe depression, and very low to low of social skills.

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Conflicts of interest statement

The authors have each completed an ICMJE disclosure form. None of the authors declare any potential or actual relationship, activity, or interest related to the content of this article.

Data sharing statement

The present review is based on the references cited. Further details, opinions, and interpretation are available from the corresponding authors on reasonable request.

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