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ORIGINAL RESEARCH   Open Access

Depression literacy status in Bangladesh: A cross-sectional comparative observation

S.M. Yasir Arafat[1], Shahoriar Ahmed[2], Md. Saleh Uddin[3]

[1]Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh
[2]Centre for the Rehabilitation of the Paralysed (CRP), Dhaka, Bangladesh
[3]Department of Psychiatry, Chittagong Medical College Hospital, Dhaka, Bangladesh

ABSTRACT

Background: Depression is considered as a prime source of nonfatal disease and literacy in depression has an important role in treatment of it.
Objective: We aimed to look into the depression literacy status in Bangladesh over four heterogeneous groups.
Methods: This cross sectional study conducted in four different study places and among 608 respondents. Respondents groups were consist of university students, depressed patients who were taking professional help, chronic physically ill patients without addressing the depression and medical graduates not working in mental health. Respondents were conveniently approached with the self reporting D-Lit Bangla questionnaire from March 2016 to May 2017.
Results: Distribution of the correct responses revealed poor correctness in psychotic symptom spectrum (Q1, Q3, Q5) and treatment aspects of depression (Q10, Q14, Q18, Q20) in all institutions but there were variations among the institutions. The mean score was found 9.19 and there 55.77% of the respondents had scores below the mean score.
Conclusion: The study revealed higher literacy in medical graduates and lower literacy in depressed patients. Adequate strategies should be focused to improve the depression literacy both in general and clinical populations which will ultimately reduce the burden of depression in a country like Bangladesh.

Introduction

Depression is a clinical condition presents with low mood, lack of pleasure, sleep disturbance, changes in weight, fatigability, impaired attention and concentration, changes in activity, guilt feeling, suicidal thoughts, and impaired daily functioning [1–3]. According to World Health Organization, it will be the second most burdensome disease across the world by 2020 [2–4]. Recent estimates revealed that currently about 322 million people are living with depression globally and people from Southeast Asia suffers more than other part of world [5]. It is a major contributor of suicide and repeated studies suggest that depression accounts about 60% of global suicide as a risk factor [2,5–8]. Depression is considered as

prime source of nonfatal disease and it is considered as a key determinant of health [2]. Globally, it accounted 50 million years lived in disability in 2015 measured by years of living with disability [5]. As an episodic recurrent illness, literacy regarding depression has an important role in treatment as well as improving the quality of life. Previous evidences suggest that low mental health literacy (MHL) is associated with mental health status specially depression in adolescent age [9]. Bangladesh is a densely populous developing country in Southeast Asia with gradual improvement in health and literacy but poor improvement in HL [10–12]. Moreover, the presentation of depression varies from culture to culture and previous review revealed that, presentation of depression is more

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Contact S.M. Yasir Arafat ✉ arafatdmc62@gmail.com ▱ Department of Psychiatry, Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh.

somatic in South Asia than the western countries [13,14]. The prevalence of depressive illness is about 4.6% in Bangladesh and a good literacy in depression would be needed to combat the burden of the disorder [2,5,15]. D-Lit Bangla is a psychometrically valid 20-item tool which can assess an individuals' status of knowledge regarding symptomatology, impact of depression and about the depression management [3]. This cross sectional study objected to look into the depression literacy status in Bangladesh. It explored the differences of literacy status among heterogeneous groups of respondents such as medical graduates, non-medical graduates, depressed patients, and chronic physically ill patients.

Methods

Ethical consideration

Researchers were duly concerned regarding the ethical aspects of the study. Approval was taken from ethical committees and the respective authorities of the institutions prior conducting the study. Informed written consent was taken from the respondents before collecting the data. Data were collected anonymously and proper confidentiality was ensured throughout the study.

Instrument

Data were collected by administrating the D-Lit Bangla questionnaire which was validated by Arafat et al. [3] consists of 20 items that specifically extract information about depression symptomatology, impact of depression and about its management.

Design and subjects

This cross sectional study conducted in four different study places which were selected purposively. The study places were ASA University Bangladesh (ASAUB), Bangabandhu Sheikh Mujib Medical University (BSMMU), Centre for the Rehabilitation of the Paralysed (CRP), and Chittagong Medical College Hospital (CMCH). We assessed four groups of respondents from the four study places. 209 students from ASAUB, 105 depressed patients diagnosed by psychiatrist from BSMMU, 150 spinal cord injured patients from CRP and 144 graduated physicians from CMCH were included in the study. Total 608 respondents of four groups were assessed. The first group was university undergraduate students, the second group was depressed patients who were taking professional help for depression, the third group was chronic physical ill patients without addressing the depression and the forth group was fresh medical graduates working in hospital. Respondents were conveniently approached with the self reporting D-Lit Bangla questionnaire from March 2016 to May 2017. Explanations were provided if it was asked by the respondents. Those who are unable to read the questionnaire; questions were read out to them and responses were collected by the data collectors. Data collectors were adequately trained considering the issues in the socio-cultural aspects by the principal investigator. After collection data were managed adequately

Table 1. Distribution socio-demography variables of the respondents (*n* = 608).

	CMCH (*n* = 144)		ASUB (*n* = 209)		CRP (*n* = 150)		BSMMU (*n* = 105)	
	N	%	*N*	%	*n*	%	*n*	%
Age								
0–14	0	0	0	0	6	4	1	0.9
15–30	143	99.3	152	74.5	62	41.3	42	40
31–60	1	0.7	57	25.5	75	50	60	57.2
>60	0	0	0	0	7	4.7	2	1.9
Sex								
Male	60	41.7	116	55.8	135	90	69	65.7
Female	84	58.3	92	44.2	15	10	36	34.3
Marital status								
Married	28	19.4	80	38.2	96	64	62	59
Unmarried	116	80.6	127	60.7	49	32.7	37	35.2
Divorce/others	0	0	2	1.1	5	3.3	6	5.8
Residence								
Urban	141	97.9	194	94.6	98	65.3	71	67.6
Rural	3	2.1	15	5.4	52	34.7	34	32.4
Education								
Up to HSC	0	0	46	22.1	140	93.3	69	65.7
Graduation to Post graduation	144	100	163	77.9	10	6.7	36	34.3

and then analyzed by Statistical Package for Social Science version 16 software.

Results

Socio demography

Total 608 participants responded the structured questionnaire and D-Lit Bangla questionnaire from 04 different study places. The study places are: a public medical college hospital; a private university; a rehabilitation center; and a medical university. The distributions of participants are as follows: CMCH–24%, ASAU–34%, CRP–25%, and BSMMU–17%. Two-thirds (66.8%) of the participants' age were from 15–30 years. Among the participants 57.2% were male and 54.1% were unmarried,

55.8% of the participants studied graduation or post-graduation level (Table 1). Most of the participants (72.5%) come from urban background and more than half (56.2%) of the study population belong to middle socio-economic status (Table 1).

Symptoms, impact and management

The distribution of correct responders of depressive symptoms as follows: guilt feeling–79.11%, reduced self-esteem/confidence–79%, disturbance in attention concentration/memory impairment–54.11%, sleep disturbance mentioned–71.2%, eating behavior or weight change–63.65%, psychomotor activity change–77.5%, hearing voice (not an usual symptom)–25.7%, irrelevant speech (not an usual symptom)–12.3%, and reckless behavior (not an

Table 2. Distribution of correct responses of D Lit-Bangla.

| Questions	CMCH % (n = 144)	ASAUB % (n = 209)	CRP % (n = 150)	BSMMU % (n = 105)	Total % (N = 608)
Q1. People speak in a rambling and disjointed way (False)	9.72 (14)	4.78 (10)	17.33 (26)	23.81 (25)	12.34 (75)
Q2.People with depression may feel guilty when they are not at fault. (True)	90.28 (130)	84.21 (176)	72 (108)	63.81 (67)	79.11 (481)
Q3. Reckless and foolhardy behaviour is a common sign of depression. (False)	9.72 (14)	10.05 (21)	23.33 (35)	20.95 (22)	15.13 (92)
Q4. Loss of confidence and poor self-esteem may be a symptom of depression. (True)	93.06 (134)	72.73 (152)	80 (120)	70.48 (74)	79 (480)
Q5.People with depression often hear voices that are not there. (False)	27 (39)	18 (38)	31.33 (47)	30.48 (32)	25.66 (156)
Q6.Sleeping too much or too little may be a sign of depression. (True)	92.36 (133)	79 (165)	40.67 (61)	70.48 (74)	71.22 (433)
Q7.Eating too much or losing interes1t in food may be a sign of depression. (True)	87.50 (126)	67 (140)	36 (54)	63.81 (67)	63.65 (387)
Q8. Depression does not affect your memory and concentration. (False)	67.36 (97)	52.15 (109)	52 (78)	42.86 (45)	54.11 (329)
Q9. People may move more slowly or become agitated as a result of their depression. (True)	88.19 (127)	74.16 (155)	75.33 (113)	72.38 (76)	77.47 (471)
Q10. Clinical psychologists can prescribe antidepressants. (False)	14.58 (21)	18.66 (39)	36 (54)	8.57 (9)	20.23 (123)
Q11. Moderate depression disrupts a person's life as much as multiple sclerosis or deafness. (True)	52 (75)	43.54 (91)	20 (30)	37.14 (39)	38.65 (235)
Q12. Most people with depression need to be hospitalised. (False)	72.22 (104)	54 (113)	57.33 (86)	29.52 (31)	55 (334)
Q13. Many famous people have suffered from depression. (True)	87.50 (126)	65.55 (137)	78 (117)	55.24 (58)	72 (438)
Q14. Many treatments for depression are more effective than antidepressants. (False)	12.50 (18)	9 (19)	34.67 (52)	14.29 (15)	17.11 (104)
Q15. Cognitive behavioural therapy is as effective as antidepressants for mild to moderate depression. (True)	81.25 (117)	52.15 (109)	80 (120)	28.57 (30)	61.84 (376)
Q16. Of all the alternative and lifestyle treatments for depression, vitamins are likely to be the most helpful. (False)	40.28 (58)	25.36 (53)	81.33 (122)	24.76 (26)	42.60 (259)
Q17. People with depression should stop taking antidepressants as soon as they feel better. (False)	65.28 (94)	33 (69)	65.33 (98)	33.33 (35)	48.68 (296)
Q18. Antidepressants are addictive. (False)	36.81 (53)	30.62 (64)	20 (30)	27.62 (29)	29 (176)
Q19. Antidepressant medications usually work straight away. (False)	78.47 (113)	40.19 (84)	57.33 (86)	32.38 (34)	52.14 (317)
Q20. All antidepressants having sedative property which impairs day time activity	18 (26)	9 (19)	7.33 (11)	11.43 (12)	11.18 (68)
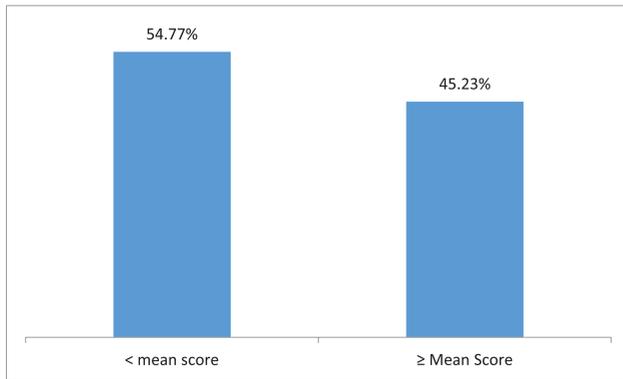
Figure 1. Distribution of respondents based on the mean score (9.19).

Figure 2. Comparison between the total mean and class mean.

usual symptom)–15.13%. Among the respondents, 38.7% rightly said about impairment of daily functioning, 55% correctly mentioned about necessity of hospitalization, 72.3% correctly said that famous people also suffer from depression. There are some items in the questionnaire (D-Lit Bangla) mentioning psychologist role in depression management, efficacy of psychotherapy or counseling, other treatment option's efficacy, properties of antidepressants (duration of action, side effects: sedation/addiction, switching technique) and role of vitamin in depression management. The distribution of correct responders according to items as follows: psychologist role in management of depression–20.23%, Other treatment option's efficacy–17.2%, psychotherapy/counselling efficacy–61.84%, (usually absence of) sedative property of antidepressants–11.2%, (absence of) addictive property–29.2%, delayed onset of action of anti-depressants–52.4%, anti-depressants should not be stopped immediately after recovery–48.8%, and vitamin is an not effective treatment–42.7% (Table 2).

Distribution of the correct responses revealed poor correctness in psychotic symptom spectrum (Q1, Q3, Q5) and treatment aspects of depression (Q10, Q14, Q18, Q20) (Table 2) in all institutions and there were variations among the institutions. The mean score was found 9.19 and there 55.77% of the respondents had scores below the mean score (Fig. 1). There were differences in different institutions and there were also variations in means of the classes in comparison with the mean of the total (Fig. 2).

CMCH

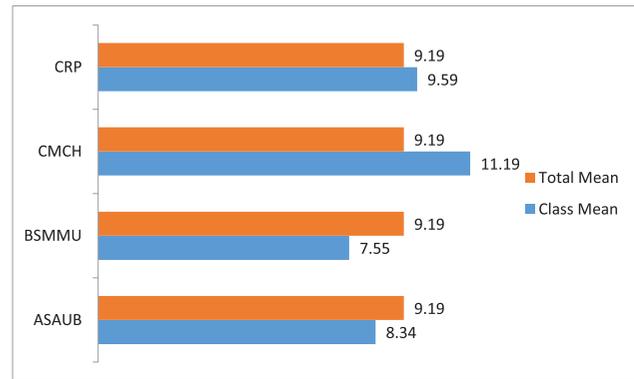The participants were fresh graduates of Bachelor of Medicine & Bachelor of Surgery and working as a trainee physician in different wards of the hospital. Among the total 144 participants, 41.7% were male, 80.6% were unmarried, 97.9% were from urban background and 85.4% were from nuclear family (Table 1).

Symptoms (Cognitive, biological, behavioral, and psychotic features), impact, management

The distribution of correct responses to D Lit Bangla items by medical graduates was found in following manner: guilt feeling–90.9%, poor self-esteem–93.1%, memory impairment–67.4%, psychomotor change–88.2%, sleep disturbance–92.4%, eating behavior–87.5%, hearing voice (not an usual symptom)–27.1%, irrelevant speech (not an usual symptom), reckless behavior–9.7% (Table 3). The distribution of correct responses of items those related to impact of depression were found as following- impairment by disease–52.4%, hospitalization needed–72.7%, and famous people suffers from depression–87.3%. The distribution of correct responses regarding management of depression were found as following: psychologist role–14.7%, other measures efficacy–12.6%, psychotherapy/counseling efficacy–81%, sedative property of antidepressants–18.1%, addictive property of antidepressants–36.8%, onset of action of antidepressants–78.5%, stopping of antidepressants–65.3%, efficacy of vitamin–40.6% (Tables 2 and 3). Other than the correct response, "incorrect" response was more prominent than the "don't know" option (Table 3).

ASAUB

Among 209 participants, 74.5% participants were under 30 years, 55.8% were male, 76.8% studied up to honors and masters, 94.6% were from urban background (Table 1).

Table 3. Distribution of response to D-Lit Bangla questionnaire among the respondents (analysis of variance).

	CMCH (n = 144)%			ASAUB (n = 209)%			CRP (n = 150)%			BSMMU (n = 105)%			
	Correct	Incorrect	Don't know	Correct	Incorrect	Don't know	Correct	Incorrect	Don't know	Correct	Incorrect	Don't know	P value
Guilt	90.9	3.5	5.6	84.2	3.8	12	72	20.7	7.3	63.8	17.1	19.1	0.000
Esteem	93.1	2.8	4.2	72.7	7.7	19.6	80	6	14	70.5	5.7	23.8	0.000
Memory	67.4	27.8	4.9	52.2	36.8	11	52	35.3	12.7	43.3	39.4	17.3	0.998
Agitation	88.2	4.2	7.6	74.2	8.1	17.7	75.3	14	10.7	72.4	3.8	23.8	0.002
Sleep disturbance	92.4	3.5	4.2	78.9	7.7	13.4	40.7	34.7	24.6	70.5	5.7	23.8	0.000
Eat	87.5	5.6	6.9	67	12.4	20.6	36	34	30	63.8	11.4	24.8	0.000
Hearing voice	27.1	41	31.9	18.2	43.1	38.7	31.3	21.3	47.4	31.1	27.2	41.7	0.010
Irrelevant speech	9.7	78.5	11.8	4.8	78.5	16.7	17.3	78	4.7	23.8	40	36.2	0.000
Reckless behavior	9.7	77.8	12.5	10	70.3	19.7	23.3	70.7	6	21	44.8	34.2	0.000
Impairment	52.4	18.9	28.7	43.5	13.9	42.6	20	34	46	37.1	15.2	47.7	0.000
Hospitalization	72.7	11.9	15.4	54.1	14.4	31.5	57.3	15.3	27.4	29.5	32.4	38.1	0.224
Famous people	87.3	2.8	9.7	65.6	9.6	24.8	78	4.7	17.3	56.3	6.8	36.9	0.000
Psychologist role	14.7	73.4	11.9	18.7	51.2	30.1	36	26.7	37.3	8.6	52.4	39	0.000
Other measure	12.6	71.3	16.1	9.1	46.9	44	34.7	44	21.3	14.6	36.9	48.5	0.001
Counselling	81	12	07	52	10	38	80	07	13	29	4	67	0.000
Sedative	18.1	61.1	20.8	9.1	53.6	37.3	7.3	52	40.7	11.7	62.1	26.2	0.013
Addictive	36.8	43.8	18.2	30.9	22.7	46.4	20	28.7	51.3	27.9	32.7	39.4	0.000
Works instant	78.5	4.9	16.6	40.2	18.2	41.6	57.3	4.7	38	33.3	23.5	43.2	0.041
Stop immediately	65.3	17.4	17.3	33	25.8	41.2	65.3	7.3	27.4	34	28.2	37.1	0.083
Vitamin effective	40.6	25.2	34.3	25.4	27.8	46.8	81.3	2.7	16	25	15.4	59.6	0.001

Symptoms (Cognitive, biological, behavioral, and psychotic features), impact, management

The distribution of correct responses of depressive symptoms as follows: guilt feeling–84.2%, low self-esteem–72.7%, memory disturbance–52.2%, psychomotor activity–74.2%, sleep disturbance–78.9%, eating problem–67%, hearing voice (not an usual symptom)–18.2%, irrelevant speech (not an usual symptom)–4.8%, reckless behavior(not an usual symptom)–10% (Table 3). Other than the correct answer, "don't know" option was more prominent than the "incorrect" one (Table 1).

CRP

The participants were the admitted patients of spinal cord injury from lower and lower middle socio-economic background. Among the 150 participants 90% were male, 93.3% studied up to HSC and rests were post graduate, 24% of the samples were employed, 32% were student (Table 1).

Symptom (Cognitive, biological, behavioral, and psychotic features) impact, management

Questionnaire items related to depressive symptoms correctly responded as follows: guilt feeling–72%, poor self-esteem–80%, disturbed memory–52%, psychomotor activity–75.3%, sleep disturbance–40.7%, eating behavior–36%, hearing voice (not an usual symptom)–31.3% correctly, irrelevant speech (not an usual symptom)–17.3%, and reckless behavior(not an usual symptom)–23.3% (Table 3). Among the other options "incorrect" were found to be more prominent (Table 3).

BSMMU

The participants of this study were the depressed patients attending the hospital for treatment of depression. Among 105 depressed patients, 38.1% were male, 34.5% were unmarried, 32.5% were graduated, 66.7% were from urban background, 68.7% were housewife (Table 1).

Symptoms (Cognitive, biological, behavioral and psychotic features), impact and management

The response to depression symptoms are correctly responded as follows: guilt feeling–63.8%, poor self-esteem–70.5%, reduced attention and concentration–43.3%, agitation or psychomotor problem–72.4%, sleep disturbance–70.5%, eating problem–63.8%, auditory hallucination (not an usual symptom)–31.1%, irrelevant speech (not an usual symptom)–23.8%, reckless behavior (not an usual symptom)–21% (Table 3). Among other options "don't know" was more prominent (Table 3).

Discussion

It is well established that HL plays a very important role in diseases identification, help seeking, prevention, medication compliance and so. HL includes: 1) obtaining, maintaining health and identifying illness; 2) understanding how and where to access and how to evaluate health information and health care; and 3) understanding how to properly apply prescribed treatments; and, obtaining and applying skills related to social capital [16]. The MHL derived from this HL concept and it suggests the ability to manage and prevent mental health problem on the basis of knowledge and believe [12,17]. Depression literacy is disorder specific MHL and can be defined as the ability to identify depression and to make informed decisions regarding treatment [18]. Repeated evidences indicate poor depression literacy of depression knowledge among patients and general population affects identification, need for treatment, help-seeking behavior, treatment, compliance to the antidepressants for treatment of depression [9,18,19]. To the authors' best knowledge this is the first study to explore depression literacy for the huge population of Bangladesh with poor HL and MHL [9]. Total 608 participants from 4 heterogeneous groups were studied. The study observed significant differences in depression literacy between the four groups obtained from the responses of D Lit questions except three questions regarding memory disturbance, need for hospitalization and antidepressant's stopping after improvement (D Lit Bangla Q8, Q12 & Q19) (Table 3). Means score was found 9.19 (±3.45) in the score range 0–20 that was found 8.6 (±4.48) in score range 0–22 in the Arabic validation study [20]; 10.61 (±3.28) in another study in 22 items [19]. But the proportion respondents in below and above the mean are similar (54.77% vs. 53.4%) in both of the studies [20]. Median was found nine that was different from study of Ram et al. [18]where it was found 13.21 [18]. The mean was found different in the four groups (Fig. 2). It was found greater than the total mean in the medical graduates and in spinal cord injury patients; smaller in university students and depressed patients. Larger mean in CRP group and smaller mean in ASAUB group was quite unexpected. Moreover, the item wise response variations (Table 3) were found to be statistically significant except item 8, 12, 17 in D Lit Bangla questionnaire which includes memory disturbances, hospitalization & stopping of antidepressants. Item wise "correct" responses distribution varied significantly among the different groups (Table 2) and studies in different settings conducted by Ram et al. [18] and Fonseca et al. [21]. The overview of response pattern shows that medical graduates having better understanding about core symptoms (cognitive, biological, and behavioral) of depression, its impact on person and treatment options (antidepressants, psychotherapy) then other three groups (Table 3). Despite of having satisfactory knowledge then other three groups, surprisingly only 15% of them correctly said about psychotic features and about 35% of them rightly said about management of depression. The responses of items regarding impact and management of depression don't differ significantly with university students or medical graduates (Table 3).

Conclusion

Depression literacy is a vital part to treat depression appropriately as depression is recurrent, episodic burdensome disorder. This study exposed the status of depression literacy or depression knowledge in heterogeneous groups in Bangladesh. The study revealed higher literacy in medical graduates and lower literacy in depressed patients. Further longitudinal interventional studies would be better to generalize the results and to find out the cause-effect relationship. However, adequate strategies should be focused to improve the depression literacy both in general and clinical populations which will ultimately reduce the burden of depression in a country like Bangladesh.

Conflict of interest

Having no conflict of interest.

Funding

Acknowledgments

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