

Research Article

# Level and Associated Factors of Literacy and Stigma of Suicide among Bangladeshi Physicians: A Cross-Sectional Assessment

# Mohammad Muntasir Maruf,<sup>1</sup> Farzana Rabin Shormi,<sup>2</sup> Mohammad Waliul Hasnat Sajib,<sup>3</sup> Panchanan Acharjee,<sup>4</sup> Hosnea Ara,<sup>5</sup> Susmita Roy,<sup>6</sup> Srijony Ahmed,<sup>7</sup> and S. M. Yasir Arafat<sup>8</sup>

<sup>1</sup>Department of Geriatric and Organic Psychiatry, National Institute of Mental Health, Dhaka, Bangladesh

<sup>2</sup>Department of Psychiatry, Holy Family Red Crescent Medical College, Dhaka, Bangladesh

<sup>3</sup>Department of Psychiatry, Shaheed M. Monsur Ali Medical College, Sirajganj, Bangladesh

<sup>4</sup>Department of Psychiatry, Chittagong Medical College, Chittagong, Bangladesh

<sup>5</sup>Department of Psychiatry, Shaheed Monsur Ali Medical College, Dhaka, Bangladesh

<sup>6</sup>Department of Psychiatry, Sylhet MAG Osmani Medical College, Sylhet, Bangladesh

<sup>7</sup>Department of Psychiatry, Dhaka Community Medical College and Hospital, Dhaka, Bangladesh

<sup>8</sup>Department of Psychiatry, Enam Medical College and Hospital, Dhaka 1340, Bangladesh

Correspondence should be addressed to S. M. Yasir Arafat; arafatdmc62@gmail.com

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*Objectives.* Literacy and stigma of suicide among doctors affect health-service delivery for persons with suicidal behavior. However, no attempt has been identified to assess those among physicians in Bangladesh. We aimed to determine the level and associated factors of suicide literacy and stigma toward suicide among physicians in Bangladesh. *Methods.* We collected data from 203 physicians in February 2022 by Google Forms. We used the Bangla literacy of suicide scale (LOSS-B) and the Bangla stigma of suicide scale (SOSS-B) to assess the literacy and stigma of suicide. The instrument also included questions for collecting sociodemographic variables and assessing suicidal behavior. *Results.* The mean age of the physicians was  $34.17 \pm 7.86$  (range 23–66) years, 109 (53.7%) were females, 150 (73.9%) were married, and 181 (89.2%) were Muslim. The mean LOSS-B score was  $5.9 \pm 1.96$  (range 1-10). Suicide literacy was higher in singles (p = 0.013), doctors with a family history of suicide (p = 0.018), a history of suicidal thought in lifetime ( $p \le 0.001$ ), and in the last year (p = 0.03). Muslims (p = 0.017) and city dwellers (p = 0.021) had higher scores in the stigma subscale of SOSS-B whilst respondents with history of mental illness had a significantly lower level of stigma ( $p \le 0.006$ ). The stigma and isolation subscales were positively correlated indicating a higher value stigma creates higher isolation ( $p \le 0.001$ ). No relationship between suicide literacy and suicide stigma was identified among the physicians. *Conclusions.* Suicide literacy among the physicians of Bangladesh is low albeit higher than the level among the students. Appropriate programs should be designed to improve the status quo because physicians play fundamental roles as health-service providers as well as gatekeepers in suicide prevention.

# 1. Introduction

Suicide is a multifactorial global public health problem that killed 703,000 people all over the world in 2019 [1]. It is an outcome of a complex interaction between multiple factors expressed as genetic, environmental, psychological, social, and cultural [2–4]. Due to its multidimensional causal association, prevention activities cover a wide spectrum of intervention areas [2]. Among the several risk factors, psychiatric disorders have been identified as a prominent risk

factor, and identification and treatment of mental illnesses are potential prevention strategies [2, 3]. Evidence showed that about three-fourths of the people who died by suicide got in touch with primary care providers within the year of suicide, and near about half of the victims did so in the preceding month [5]. Nevertheless, risk factors like depression and anxiety with suicidal ideations are often remained unnoticed in primary health care [6]. Healthcare providers may feel incompetent to deal with suicidality and reluctant to seek or provide adequate care to suicidal individuals [7, 8]. Primary care physicians (PCPs) are potential persons to identify risky individuals for suicidal behavior; therefore, empowering PCPs is a potential intervention point for suicide prevention [2]. Stigmatization is considered one of the major barriers against care-seeking as well as identification and subsequent management of suicidality [9]. At the same time, high levels of stigma and low levels of literacy among the services providers also affect health-service care provision. Research suggests that deficits in suicide literacy-the knowledge about the risk factors, sign/symptoms, and management of suicidality-is associated with a higher level of stigma [10].

Bangladesh is a Muslim majority low- and middleincome (LMIC) category country where suicide is a criminal offence [11]. Due to the religious and sociocultural factors and fear of harassment by police, there have been strong negative cultural attitudes and stigma toward suicide [11]. Health care services for persons with self-harm and suicidal behavior are scanty, untapped, and neglected. Patients with suicidal and self-harm behavior presented at hospital emergency are stamped as "police case" and referred to public hospitals where they are grossly neglected due to patient load, inadequate services, low literacy, and high stigma [12]. One recent study revealed that there is a lower level of literacy and higher level of stigma among university students in Bangladesh that warrants adequate intervention strategies [13]. Although an increased number of studies is coming out assessing various aspects of suicide in the country assessment of suicide literacy and stigma among the health-service providers specially physicians has not been identified [14]. Therefore, we aimed to determine the level of suicide literacy and stigma toward suicide among physicians in Bangladesh. Assessing the level of stigma and literacy along with determinants in other groups would help to get the complex picture and bolster the national suicide prevention strategies in Bangladesh which could be tested in other LMIC settings also. As physicians are the vital component of health care service provision and play important roles as gatekeepers, the level of suicide literacy and stigma can sort the potential areas for improved services and suicide prevention in low-resource settings.

# 2. Methods

2.1. Data Collection. This cross-sectional study was conducted in February 2022 through an online survey using Google Forms. The physicians who are Bangladesh by birth having Bangla as their mother tongue and currently working in Bangladesh were included in the study. Foreign physicians working in Bangladesh and Bangladesh physicians currently working abroad were excluded. The link of the form was shared conveniently to the physicians in social media platforms (WhatsApp/Facebook Messenger). The participants were also requested to forward the link to other physicians or physician groups known to them. Prior to commencing main questionnaire, the participants were instructed to read the informed consent page at the beginning of the survey and then click on the agreement button if they agreed to participate.

2.2. Measures. To fulfill the objectives of the study, we used an instrument with three sections: Questionnaire for sociodemographic and other clinical variables, Bangla literacy of suicide scale (LOSS-B), and Bangla stigma of suicide scale (SOSS-B).

2.2.1. Sociodemography and Other Clinical Variables. The following sociodemographic variables were collected: gender, education, permanent residence, religion, and marital status. In addition, we also collected the following clinical variables: history of chronic physical illness, mental illness, family history of suicide, and suicide attempt. This section also included questions assessing suicidal behavior consisted of lifetime suicidal thought and attempt, suicidal thought in the past year, and ventilation or communication of the suicidal thoughts with others. We adopted the questions related to suicidality form our previous study [13]. We asked the respondents about the aforementioned suicidal behavior.

2.2.2. Suicide Literacy. Bangla literacy of suicide scale (LOSS-B) was used to assess the participants' suicide literacy levels which were validated in Bangla by Arafat et al. in 2022 [13]. The main LOSS was developed by Calear et al. in 2012 [15]. LOSS-B entails 12 statements having three response options, namely, yes, no, and do not know. The total score of a participant, calculated based on the correct answer, ranges from 0 to 12. It assesses literacy about suicide in four dimensions: sign/symptom (three items), cause/ nature (four items), risk factor (three items), and treatment/prevention (two items). LOSS-B has four (2, 4, 6, and 8) true statements, and the rests are false.

2.2.3. Suicide Stigma. Bangla stigma of suicide scale (SOSS-B) was used to assess the participants' suicide stigma levels which were validated in Bangla in 2022. The main SOSS was developed by Batterham et al. [16, 17]. The SOSS-B, used to measure stigma toward the persons who die by suicide, comprises 13 items. The scale contains a common descriptor, that is, "people who die by suicide are": the respondents who would mention their extent of agreement with each descriptor by indicating one from the five mentioned options (strongly disagree, disagree, neutral, agree, and strongly agree), having the score ranging between one and five. The items of the questionnaire are distributed into three subscales: stigma (5 items), isolation (4 items), and glorification (4 items). The score of each subscale is determined by calculating the mean of responses to the items within the subscale.

2.3. Statistical Analysis. For the statistical analysis, Statistical Package for the Social Sciences version 28 software and Microsoft Excel (2010) were used. Variables regarding sociodemography and suicidal behaviors were expressed in frequency and percentages. Pearson correlation analysis was performed to assess the correlation between levels of literacy and three domains of stigma. The association between sociodemography and LOSS-B and SOSS-B score was measured by independent *t*-test. A significance level of p < 0.05 was considered statistically significant.

2.4. *Ethical Considerations*. The ethical review committee of Enam Medical College approved the study on May 22, 2021 (EMC/ERC/2021/05-1) against the last author as principal investigator.

#### 3. Results

In the current study, the mean age of the 203 respondents was 34.17 ± 7.86 years (range 23-66 years). More than half (n = 109, 53.7%) of the respondents were females, 114 (56.2%) completed graduation, around three-fourth (n = 150, 73.9%) were married, 181 (89.2%) were Muslim, and three-fourth (n = 154, 75.9%) were living in urban area (Table 1). The mean LOSS-B score was  $5.9 \pm 1.96$  ranging from 1 to 10 where 61.6% of the physicians scored 0-6 and 38.4% scored above 7-10. The lowest correct response was found in item 1 (11.82%) assessing the cause/nature domain of suicide literacy indicating the association of depression and suicide, and the maximum correct response was found in item 2 (91.96%) assessing the treatment/prevention domain of suicide literacy mentioning the role of psychiatrist in suicide prevention (Table 2). There was no relationship between levels of suicide literacy and three domains of suicide stigma among the physicians. The assessment of correlation among the three subscales of SOSS-B revealed that stigma and isolation subscales were positively correlated indicating a higher value stigma creates higher isolation  $(p \le 0.001)$  (Table 3). No further association among the subdomains of stigma has been identified. Besides being significantly higher in singles (unmarried, divorcee, separated, and widow/widower) (p = 0.013), suicide literacy showed a significantly higher value among physicians with family history of suicide (p = 0.018), history of suicidal thought in lifetime  $(p \le 0.001)$  and in the last year (p = 0.03) (Table 4). Religion and the permanent residing area had significant association with suicide stigma. Muslim (p = 0.017) and city dwellers (p = 0.021) had higher scores in stigma subscale of SOSS-B whilst respondents with history of mental illness had a significantly lower level of stigma ( $p \le 0.006$ ) (Table 5). A significantly higher score was reported in the glorification subscale among the physicians with history of mental illness (p = 0.018) (Table 5).

#### 4. Discussion

The current study revealed a low literacy of suicide (LOSS-B mean  $5.9 \pm 1.96$ ), and only 38.4% scored above 6 out of a total score of 12. Albeit, more than nine in ten persons

TABLE 1: Sociodemographic variables of respondents (n = 203).

Variable	Category	п	%
	Male	93	45.81
Gender	Female	109	53.69
	Others	1	0.49
	Graduated	114	56.16
Education	Postgraduation	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	43.84
	Unmarried	46	22.66
	Married	150	73.89
Marital status	Divorcee	4	1.97
	Separated	1	0.49
	Widow/widower	2	0.98
aligion	Islam	181	89.16
Religion	Hindu	15	7.39
	Others	7	3.45
Permanent resident	City	154	75.86
r ermanent resident	Others	49	24.14
History of chronic physical illness	Yes	55	27.09
History of mental illness	Yes	47	23.15
Family history of suicide attempt	Yes	27	13.30
Family history of suicide	Yes	8	3.94
Life time suicidal thought	Yes	89	43.84
Suicide thought in last year	Yes	40	19.70
Suicide attempt	Yes	25	12.31
Ventilation	Yes	43	21.18
Total		203	100

(91.96%) correctly mentioned the role of health care providers (psychiatrists) in suicide prevention, and only about one in ten persons (11.82%) correctly identified the role of depression in suicide. Suicide literacy was higher in single physicians and physicians with a family history of suicide and previous suicidal thoughts. Muslim physicians had a higher stigma than other religions, and having a mental illness was associated with a lower stigma. There was no association between literacy and stigma among physicians in Bangladesh.

The level of suicide literacy is higher than the level found among university students  $(4.27 \pm 1.99)$  in a previous study of Bangladesh [13], among healthcare professional students (including undergraduate and postgraduate medical and paramedical students) in South India  $(4.07 \pm 1.58)$  [18], and university students in an Arab country, Jordan  $(3.82 \pm 2.13)$  [19]. This might be due to differences in academic background and different sample characteristics as our sample was comprised of medical graduates whilst others were students. The physicians have more encounters of knowledge during academic learning and clinical practice than the students which may be attributed to this better level. One recent study assessing literacy of suicide among physicians and nurses in Nepal found that 62.2% of the total participants had a higher score than the mean of LOSS [20] which is higher than our finding (38.4%). They used a longer version of LOSS. We do not know the exact reasons

Item no.	Item	Dimension	Correct response ( <i>n</i> )	Correct response (%)	
1	"If assessed by a psychiatrist, everyone who suicides would be diagnosed as depressed" (F)	Cause/nature	24	11.82	
2	"Seeing a psychiatrist or psychologist can help prevent someone from suicide" (T)	Treatment/prevention	186	91.96	
3	"Most people who suicide are psychotic" (F)	Risk factor	89	43.84	
4	"There is a strong relationship between alcoholism and suicide" (T)	Risk factor	163	80.29	
5	"People who talk about suicide rarely kill themselves" (F)	Sign/symptom	81	39.9	
6	"People who want to attempt suicide can change their mind quickly" (T)	Sign/symptom	77	37.93	
7	"Talking about suicide always increases the risk of suicide" (F)	Cause/nature	53	26.11	
8	"Not all people who attempt suicide plan their attempt in advance" (T)	Sign/symptom	148	72.91	
9	"People who have thoughts about suicide should not tell others about it" (F)	Treatment/prevention	169	83.25	
10	"Very few people have thoughts about suicide" (F)	Cause/nature	86	42.36	
11	"Men are more likely to suicide than women" (F)	Risk factor	65	32.02	
12	"A suicidal person will always be suicidal and entertain thoughts of suicide" (F)	Cause/nature	56	27.58	

TABLE 2: Correct responses to items of the literacy of suicide scale (n = 203).

TABLE 3: Correlation between LOSS-B and three subscales of SOSS-B.

	LOSS	Stigma	Isolation	Glorification
LOSS				
Pearson correlation		-0.105	-0.072	-0.135
Sig. (2-tailed)		0.136	0.305	0.056
Stigma				
Pearson correlation	-0.105		.621	-0.095
Sig. (2-tailed)	0.136		0.000	0.178
Isolation				
Pearson correlation	-0.072	.621		0.114
Sig. (2-tailed)	0.305	0.000		0.105
Glorification				
Pearson correlation	-0.135	-0.095	0.114	
Sig. (2-tailed)	0.056	0.178	0.105	

Boldface values indicate positive correlation.

explaining the variation. We can speculate that it is due to a higher encounter psychiatry teaching hours and internship placement in undergraduate courses in Nepal than in Bangladesh [21]. However, further analysis is warranted to identify the attributable factors in an objective manner.

Considering the academic background and professional training of physicians, they are expected to deal with both the deaths due to suicide and the survivors of suicidal attempts. Yet, surprisingly, the correct response was lowest for the statement "If assessed by a psychiatrist, everyone who suicides would be diagnosed as depressed" (11.82%). It was found at 57.4% among physicians and nurses in Nepal [20]. It indicates the physician's relatively poor knowledge about depression and its association with suicidality. Only about one-fourth of the respondents correctly identified

the statements concerning "Talking about suicide always increases the risk of suicide" (26.11%) and "A suicidal person will always be suicidal and entertain thoughts of suicide" (27.58%). It was 42.6% and 39.9% among the participants of Nepal [20]. This kind of knowledge may encourage the physicians to avoid the issue of suicide during consulting patients as well as expressing his/her own suicidal feelings to others. These three statements were also elicited most incorrect responses in the study among university students of Bangladesh. Though comparing to that study, the correct response rates were higher in the current study, which might also be explained by their academic advantages [13]. On the other hand, the responses are lower than the Nepal study possibly due to the previously mentioned reasons [20]. Physicians had good knowledge about the role of mental health professionals and suicide prevention, which was reflected by the highest correct responses to the statements concerning "treatment and prevention," "seeing a psychiatrist or psychologist can help prevent someone from suicide" (91.96%), and "people who have thoughts about suicide should not tell others about it" (83.25%). The correct response pattern (77.13%) was also reported among university students of Bangladesh indicating that education in medical science may not have any impact on literacy and stigma of suicide in Bangladesh [13]. In the current study, no significant difference was found between graduate and postgraduate doctors regarding suicide literacy or stigma. It may indicate that higher study and overall postgraduate training in medical science have no significant impact on the knowledge and attitude regarding suicidality. So, specific training focused to suicide should be arranged to improve their knowledge and awareness.

The suicide literacy was significantly higher in female university students of Bangladesh [13], but we did not find such gender differences among physicians. Marital status

#### Mental Illness

Variable	n (%)	LOSS	5	
variable	n (70)	Mean (±SD)	p valu	
Total		5.9 (±1.96)		
Sex			0.21	
Male	93 (45.8)	5.73 (±1.99)		
Female	109 (53.7)	6.07 (±1.9)		
Education			0.44	
Graduated	114 (56.2)	5.99 (±1.92)		
Postgraduation	89 (43.8)	5.78 (±2.02)		
Marital status			0.013	
Married	150 (73.9)	5.69 (±1.97)		
Others (see Table 1)	53 (26.1)	6.47 (±1.85)		
Religion			0.47	
Islam	181 (89.2)	5.86 (±1.91)		
Others (Hindu, Christianity, and Buddhism)	22 (10.8)	6.18 (±2.36)		
Permanent resident			0.51	
City	154 (75.86)	5.95 (±1.94)		
Others (rural and suburb)	49 (24.14)	5.73 (±2.05)		
History of mental illness			0.79	
Yes	47 (23.2)	5.83 (±2.01)		
Others (no and nonresponses)	156 (76.8)	5.92 (±1.95)		
Family history of suicide			0.018	
Yes	8 (3.9)	7.5 (±1.6)		
Others (no and nonresponses)	195 (96.1)	5.83 (±1.95)		
Suicidal thought in lifetime			0.000	
Yes	89 (43.8)	6.5 (±2.01)		
Others (no and nonresponses)	114 (56.2)	5.75 (±1.93)		
Suicidal thought in last year			0.030	
Yes	40 (19.7)	6.51 (±1.96)		
Others (no and nonresponses)	163 (80.3)	5.42 (±1.83)		
History of suicidal attempt			0.21	
Yes	25 (12.3)	6.36 (±2.25)		
Others (no and nonresponses)	178 (87.7)	5.83 (±1.91)		

TABLE 4: Association between demography and level of suicide literacy (LOSS-B) score measured by independent t-test.

Boldface values indicate p value < 0.05.

had a significant association with suicide literacy in our study, contrary to the findings of the study among university students. This difference can be explained by the fact that lower proportions of university students were married (7.37%) whilst it was 73.89%. Significant association was reported with history of suicidal thought in lifetime and in the last year in the current study, whilst among university students, a history of nonfatal attempts was significant [13]. It may be assumed that suicidal thoughts lead our participants to acquire knowledge about suicidality which improved their literacy. This indicates that awareness and education programs targeted to physicians regarding suicide prevention might have the utmost effect if they are aimed to those with no exposure to suicidality. Nonetheless, further studies are warranted to have precise comments.

Suicide stigma was significantly higher among Muslim physicians than those from other religious background. This

may be related to the Islamic view of the meaning of life and afterlife where suicide is disapproved and humans are not allowed to end their lives on own choice. Although Muslims countries have lower suicide rate, especially compared to global suicide rate, several important aspects should be considered like legal status, religious cults, and lower mental health literacy [22]. Besides, Muslim societies are found to have an antagonistic view regarding such actions because Islamic Law considers suicide and suicide attempts as sin. Therefore, suicide survivors and their families in Muslim communities usually become socially stigmatized and suffer the feeling of guilt, depression, and shame [23].

The current study revealed that stigma and isolation subscales were positively correlated indicating a higher value stigma create higher isolation among the physicians of Bangladesh ( $p \le 0.001$ ). A similar correlation was found among the university students of Bangladesh [13] and Arab youth

TABLE 5: Association between	demography a	and stigma of suicide	(SOSS-B) score measured b	v independent <i>t</i> -test.

Variable	44 (0/)	Stigma		Isolation		Glorification	
variable	n (%)	Mean (±SD)	p value	Mean (±SD)	p value	Mean (±SD)	p value
Total		11.38 (±3.95)		13.66 (±3.95)		8.32 (±2.5)	
Sex			0.09		0.17		0.7
Male	93 (45.8)	10.92 (±3.44)		13.23 (±4.05)		8.38 (±2.35)	
Female	109 (53.7)	11.78 (±3.74)		14 (±3.87)		8.24 (±2.68)	
Education			0.57		0.45		0.39
Graduated	114 (56.2)	11.51 (±3.63)		13.84 (±3.93)		8.46 (±2.86)	
Postgraduation	89 (43.8)	11.22 (±3.48)		13.42 (±3.99)		8.15 (±2.05)	
Marital status			0.44		0.62		0.8
Married	150 (73.9)	11.5 (±3.37)		13.57 (±3.82)		8.35 (±2.38)	
Others (see Table 1)	53 (26.1)	11.06 (±4.06)		13.89 (±3.35)		8.25 (±2.96)	
Religion			0.017		0.85		0.34
Islam	181 (89.2)	11.59 (±3.57)		13.67 (±3.91)		8.26 (±2.59)	
Others (Hindu, Christianity, and Buddhism)	22 (10.8)	9.68 (±3.03)		13.5 (±4.39)		8.82 (±2.06)	
Permanent resident			0.021		0.23		0.78
City	154 (75.86)	11.71 (±3.65)		13.84 (±3.92)		8.29 (±2.41)	
Others (rural and suburb)	49 (24.14)	10.37 (±3.07)		13.06 (±4.03)		8.41 (±2.94)	
History of mental illness			0.006		0.48		0.018
Yes	47 (23.2)	10.13 (±3.48)		13.3 (±3.65)		9.09 (±2.9)	
Others (no and nonresponses)	156 (76.8)	11.76 (±3.51)		13.76 (±4.05)		8.09 (±2.38)	
Family history of suicide			0.26		0.91		0.63
Yes	8 (3.9)	$10(\pm 3.03)$		13.5 (±4.34)		8.75 (±2.05)	
Others (no and nonresponses)	195 (96.1)	11.44 (±3.56)		13.66 (±3.95)		8.3 (±2.56)	
Suicidal thought in lifetime			0.82		0.66		0.8
Yes	89 (43.8)	11.45 (±3.58)		13.52 (±4.02)		8.37 (±2.52)	
Others (no and nonresponses)	114 (56.2)	11.33 (±3.56)		13.76 (±3.91)		8.28 (±2.56)	
Suicidal thought in last year			0.15		0.019		0.9
Yes	40 (19.7)	10.65 (±3.15)		12.35 (±4.39)		8.28 (±2.37)	
Others (no and nonresponses)	163 (80.3)	11.56 (±3.64)		13.98 (±3.78)		8.33 (±2.58)	
History of suicidal attempt			0.22		0.90		0.15
Yes	25 (12.3)	10.56 (±3.83)		13.56 (±3.79)		9 (±2.47)	
Others (no and nonresponses)	178 (87.7)	11.5 (±3.52)		13.67 (±3.99)		8.22 (±2.54)	

Boldface values indicate p value < 0.05.

in Jordan [19]. Stigma can cause shame and silence in suicide survivors leading to social isolation which then results in complicated grief and other psychological sequelae. Selfstigma may be a significant barrier to help-seeking for physicians with suicidality. On the other hand, suicide stigma among physicians may cause delays in help-seeking among suicidal individuals, difficulty in therapeutic relationships, and poor quality of care as were reported with stigma related to mental illness [24]. Suicide literacy is important for physicians because of their important role as gatekeeper to prevent suicidality as, before both fatal and nonfatal suicidal acts, high rates of contact with healthcare professionals were reported among suicidal people [25, 26]. In the current study, there was a significantly higher score in the isolation subscale among physicians having suicidal thoughts in the last year. A significantly higher score was reported in the glorification subscale among the physicians with a history

of mental illness, which is contradictory to the findings among university students [13]. This contradiction could be explained by different sample groups and study settings, and further studies are warranted to identify the association more precisely.

Suicide literacy and stigma are important issues for physicians in various ways. Studies reported that suicide rate for physicians were higher than the rate in the general population [27]. In our study, 12.3% of the physicians had history of suicidal attempt which was comparable to the rate found (12.09%) among university students [13]. History of suicidal thought in lifetime (43.8%) and in the last year (19.7%) among our respondents was much higher than the rate reported among Australian doctors (24.8% and 10.4%, respectively). Beside mental illness, physicians face personal, professional, and institutional stigma to access health care which may increase suicide risk among them [28].

The study indicates the applicability of LOSS-B and SOSS-B in a different group of the population in Bangladesh. The instruments have already been tested among students and physicians revealing the level and associated factors of literacy and the stigma of suicide. Further attempts to the application of the instruments among the community people could be warranted. The results of this study highlight that there is no relationship between the levels of suicide literacy and domains of stigma. Further studies are warranted to identify the association (if any) and replicate the findings as physicians play an important role in suicide prevention as a gatekeeper identifying the risky individual and referring to the mental health and psychosocial support system [2, 3]. Literacy and stigma of suicide among physicians would play a deciding role in help-seeking behavior in the community. As a part of universal, selected, and indicated suicide prevention, along with general awareness programs, provision of health services for patients with suicidal behavior should be attempted, whilst increased literacy and decreased stigma would supposed to raise the help-seeking behavior [2, 3].

This is the first attempt to assess suicide literacy and stigma among physicians in Bangladesh. However, the study is not rid of limitations. As this is an online survey and a convenient sampling technique was used, there might be selection and response bias, as only physicians having access to the internet and the study link had a chance to participate in this study. So, generalization of the study results may not be possible. The cross-sectional design of the study failed to establish causal relationships between study variables. Moreover, the self-report instruments may have been influenced by social desirability and recall bias. The sample size is relatively small which may challenge the statistical power analysis of the findings. Therefore, a cautious interpretation is warranted.

#### 5. Conclusion

Suicide literacy among the physicians of Bangladesh is low albeit higher than the level among the students. Significantly higher literacy was reported among the physicians having direct exposure to suicidality in the form of recent or past suicidal thoughts and family history of suicidal attempts. Appropriate programs should be designed to improve the status quo with special attention to modification of the academic curriculum of medical education in Bangladesh because physicians are one of the key components of health care services and play a fundamental role as gatekeepers in suicide prevention.

#### **Data Availability**

The data that support the findings of this study are available on request from the corresponding author.

### **Conflicts of Interest**

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

# **Authors' Contributions**

SMY Arafat was responsible for the conception and design. MM Maruf and SMY Arafat were responsible for the methods and instrument development. SMY Arafat was responsible for the data analysis. MM Maruf and SMY Arafat were responsible for drafting the manuscript. All authors contributed in data collection and revision and approval of the manuscript.

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