

Suicide and Depression Literacy Among Healthcare Profession Students in Tertiary Care Center in South India

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ABSTRACT:

Suicide and depression literacy among healthcare profession students in tertiary care center in South India

Objective: To determine the suicide and depression literacy among healthcare professional students.

Methods: Three hundred thirty nine healthcare professional students were assessed with socio-demographic and clinical proforma, depression literacy scale, and suicide literacy scale.

Results: There was low score on measure of depression and suicide literacy. Paramedical have lower literacy of suicide (MU=9.44, Z=-5.39, p=0.001) and depression (MU=9.28, Z=-5.53, p=0.001) than medical students. On linear regression analysis (R²=0.06, F=21.66, p=0.001), there was a statistically significant association between suicide and depression literacy (p=0.001).

Conclusion: Depression and suicide literacy is poor among healthcare professional students, particularly paramedical students. Suicide literacy was positively associated with depression literacy. There is a need to sensitize these students about depression and suicide.

Keywords: depression literacy, suicide literacy, healthcare professional students

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INTRODUCTION

Health literacy is “the ability to gain access to, understand, and use information in ways which promote and maintain good health” (1). Mental health literacy has been defined as “knowledge and beliefs about mental disorders which aid their recognition, management or prevention” (2). It involves knowledge that empowers a person to take action to improve their own mental health or that of others (3). Mental health literacy includes a set of interconnected components which are; the ability to recognize disorders in order to facilitate help seeking, knowledge of professional help and treatments available, knowledge of effective self-help strategies, knowledge and skills to give first aid and support to others, and knowledge of how to prevent mental disorders (4). Mental health literacy is inadequate both

among public and medical healthcare professionals. Mental disorders are often missed by general practitioners (GPs). Little is known about how people acquire knowledge and beliefs about mental health. It is likely that personal experiences and anecdotal evidence from family and friends, internet sources, print media, books, cinema and television are an important source. There are consequences of this poor mental health literacy. First, it may place a limit on the implementation of evidence-based mental health care. Secondly the task of preventing and helping mental disorders becomes largely confined to professionals.

Suicide literacy is knowledge about the causes, risk factors, signs or symptoms, and treatments for suicidality (5). Adequate knowledge may facilitate seeking for professional support, while false and imperfect knowledge hampers it (6). Suicide literacy in general population is

inadequate (5,7). As a consequence, the issue of suicide is perceived as a taboo and warning signals of suicide is neglected. There appears to be inadequate awareness about suicide among health care professionals and healthcare professionals students (8,9). This may prevent them to seek care or provide adequate care to a suicidal person. Health care professionals often feel incompetent to deal with suicidality and have a positive attitude towards euthanasia (8,9). In general population, less exposure to suicide, older age, male gender, less education, and culturally diverse backgrounds were associated with poor knowledge; while younger age, male gender, and culturally diverse backgrounds were associated with more stigmatizing attitudes toward people who die by suicide (10).

Research has identified elevated rates of suicidal ideation and death by suicide among healthcare professionals compared to the general population (11). Many would attempt for a suicide and mode of attempts predominantly remains poisoning (12). Women working in healthcare professionals appear to be particularly at risk probably due to greater exposure to work-related stressors (13,14). Some attempts have been made to explore suicide literacy in general population (15,16), but so far no literature is available for health care professionals and healthcare professional students. Identifying groups of the population that have deficient literacy may enable better targeting of mental health promotion programs. Depression is still not well understood by health professionals and the general public (17). Depression literacy is a specific type of mental health literacy and is defined as the ability to recognize depression and make informed decisions about treatment (18). Higher depression literacy has been shown to have associations with appropriate help-seeking (19). There is some evidence from such interventions that these changes may also translate to more positive attitudes toward help-seeking (20). Depression literacy appears to be low among healthcare professionals (21). Treatment or need for treatment of depression may be under recognized due to poor depression literacy. Prevalence of depression among health care workers is much higher than general population. Prevalence varies with studies and ranges from 27–70% (22,23). It is more common among full time healthcare workers and nurses than doctors (24). Healthcare professional students also have an alarming prevalence of depressive symptoms, highest among dentistry students followed by medical students and least among student of

applied medical sciences (25,26). Keeping in view that depression is going to be a major cause of disability, it is necessary to know the depression literacy status among health care professional and healthcare professional students. This study was conducted to determine the health literacy among medical and paramedical health professionals. We hypothesized that suicide and health literacy would be more among medical than paramedical health professionals.

METHODS

A total of 339 participants were recruited in this study. Participants were students of the medical school, and paramedical school (school of nursing, pharmacy and speech & hearing) of JSS Mahavidyapeetha. Participant of medical schools were undergraduate and post graduate medical students, interns; while participants of paramedical school included undergraduate, intern or post graduate in nursing, pharmacy and speech and hearing. In this study participants were considered as paramedical if they were a health professionals associated with medical work/service, other than medical doctor or medical student. All participants were individually approached and recruited consecutively after obtaining informed consent. Participants did not receive any honorarium for participation in this study. The study was conducted from November 2016 to January 2017. Inclusion criteria included those students willing to give informed consent and those who were doing a course in medical or paramedical school for minimum of one year and involved in any patient care activities. Those who previously participated in any depression or suicide-related studies were excluded from the study as they were likely to have knowledge regarding the same. All eligible participants were subsequently assessed with following:

- (1) Sociodemographic and clinical proforma
- (2) Literacy of Suicide Scale (LOSS): The modified LOSS retained eight of 12 items (6,27). The modified LOSS solicited “true”, “false”, “don’t know” responses was classified as “false”. Correct responses are scored 1, while incorrect responses are scored 0. Literacy scores are the sum of correct items. Higher scores indicated higher suicide literacy levels. The scale provides a total literacy score (percent correct) and can be broken down into the three literacy themes of risk factors, signs/ symptoms, cause/

nature, and treatment/ prevention, for identification of strengths and weaknesses. The LOSS has previously been validated using an item-response theory approach, as items from the scale have correct or incorrect answers. Nevertheless, the Cronbach’s alpha for the scale in the present sample was 0.71. This scale was translated into Kannada for this study.

(3) Depression Literacy Questionnaire (D-Lit): Twelve of the 22 items were removed from the D-Lit, and 10 remained (27,28). The D-Lit was used to gather respondents’ knowledge about men’s depression including common symptoms, soliciting “true” or “false” responses to 10 items. Don’t know response is classified as false responses. Each correct response was assigned 1 point and false responses were assigned 0 points, so that the higher the score the higher the respondent’s depression health literacy. The D-Lit had acceptable internal consistency in the present study, with Cronbach’s alpha of 0.74. This scale has been used in Indian population in local language (Kannada).

medical and paramedical. Medical group included medical student, intern or post graduate; while paramedical group included undergraduate, intern or post graduate in nursing, pharmacy and speech and hearing. A linear regression analysis was conducted to know if patients who score on measure of depression literacy can predict the values of scores on measure of medication adherence. The level of statistical significance was kept at $p < 0.05$ for all tests.

RESULTS

Demographic and clinical characteristics of study population were characterized by more participants who were female, paramedical students, Hindu, belonged to an urban background and did not have a family or personal history of depression or suicide (Table 1a). Overall there was a low correct response in the study sample (Table 1b&2). Higher percentage of correct responses was noticed among participants in the medical group compared to para-

Table 1a: Demographic and clinical characteristics

Variables		Frequency	Percent
Gender	Male	106	31.3
	Female	233	68.7
Occupation	Medical	151	44.5
	Paramedical	188	55.5
Religion	Hindu	243	71.7
	Muslim	78	23.0
	Christian and others	18	5.3
Residence	Rural	112	33.1
	Urban	227	66.9
Family, personal history of suicide/attempt	Yes	104	30.7
	No	235	69.3
Family, personal history of depression	Yes	149	44.0
	No	190	56.0

Statistical Analysis

The data were analyzed using SPSS 16 for Windows. Descriptive statistics were used to express sociodemographic and clinical characteristics. The distribution and normality of the sample was assessed with the Kolmogorov-Smirnov and the Shapiro-Wilk test and was found to be significantly skewed. Since analysis required comparison of two variables, Mann-Whitney U test was used to know the group difference of clinical variables on the score of different scales (for comparison of 2 groups). For detailed analysis two groups were considered;

Table 1b: Clinical Characteristics

	Minimum	Maximum	Mean±SD
Age	17	31	21.80±2.18
LOSS Score	0.00	8.00	4.07±1.58
D-Lit Score	1.00	10.00	5.71±1.96

Table 2: Clinical Characteristics

Pattern of responses in LOSS and D-Lit questionnaire		n	%
LOSS questionnaire	Correct response	3	0.58
	Incorrect response	336	99.42
D-Lit questionnaire	Correct response	9	2.25
	Incorrect response	330	97.75

medicals except for the question “There is strong relationship between people’s alcoholism and suicide” in the LOSS questionnaire (Table 3).

Medical and Non medical participant had a significant group differences on the score of LOSS items “People who have thoughts about suicide should not tell others about it” ($X^2=29.14$, $df=1$, $p=0.000$); “Most People who suicide were psychotic” ($X^2=28.44$, $df=1$, $p=0.000$); “People talking about suicide always increase the risk of suicide” ($X^2=70.7$, $df=1$, $p=0.003$); “Very few People have thoughts about suicide” ($X^2=10.266$, $df=1$, $p=0.001$); “Men are more likely to die by

suicide than women” ($X^2=6.13$, $df=1$, $p=0.013$) (Table 3).

Medical and Non medical participant had a significant group difference on the score of the following D-Lit items “People with depression may feel guilty when they are not at fault” ($X^2=3.937$, $df=1$, $p=0.047$); “Loss of confidence and poor self-esteem may be a symptom of depression” ($X^2=21.113$, $df=1$, $p=0.000$); “People with depression often hear voices that are not there” ($X^2=13.187$, $df=1$, $p=0.000$); “Eating too much or losing interest in food may be a sign of depression” ($X^2=15.287$, $df=1$, $p=0.000$); “Most People with depression need to be hospitalized” ($X^2=10.541$, $df=1$, $p=0.001$) (Table 4).

Table 3: Itemized responses to LOSS questionnaire

LOSS items		Medical	Para-medical	χ^2	df	p
People who have thoughts about suicide should not tell others about it.	Incorrect	44	110	29.14	1	0.001
	Correct	107	78			
Most people who suicide are psychotic.	Incorrect	35	97	28.44	1	0.001
	Correct	116	91			
People talking about suicide always increase the risk of suicide.	Incorrect	83	133	9.01	1	0.003
	Correct	68	55			
Not all people who attempt suicide plan their attempt in advance.	Incorrect	42	67	2.35	1	0.125
	Correct	109	121			
Very few people have thoughts about suicide.	Incorrect	84	136	10.26	1	0.001
	Correct	67	52			
Men are more likely to die by suicide than women.	Incorrect	83	128	6.13	1	0.013
	Correct	68	60			
People who want to attempt suicide can change their mind quickly.	Incorrect	81	87	1.81	1	0.178
	Correct	70	101			
There is strong relationship between people’s alcoholism and suicide.	Incorrect	62	59	3.41	1	0.065
	Correct	89	129			

Table 4: Itemized responses to D-Lit questionnaire

D-Lit items		Medical	Para-medical	χ^2	df	p
People with depression often speak in a rambling and disjointed way.	Incorrect	108	128	0.46	1	0.494
	Correct	43	60			
People with depression may feel guilty when they are not at fault.	Incorrect	35	62	3.93	1	0.047
	Correct	116	126			
Loss of confidence and poor self-esteem may be a symptom of people’s depression.	Incorrect	10	48	21.11	1	0.001
	Correct	141	140			
People with depression often hear voices that are not there.	Incorrect	76	131	13.18	1	0.001
	Correct	75	57			
Sleeping too much or too little may be a sign of people’s depression.	Incorrect	37	64	3.643	1	0.056
	Correct	114	124			
Eating too much or losing interest in food may be a sign of people’s depression.	Incorrect	38	86	15.28	1	0.001
	Correct	113	102			
Depression does not affect people’s memory and concentration.	Incorrect	49	74	1.73	1	0.188
	Correct	102	114			
Having several distinct personalities may be a sign of people’s depression.	Incorrect	101	137	1.43	1	0.231
	Correct	50	51			
Most people with depression need to be hospitalized.	Incorrect	64	113	10.54	1	0.001
	Correct	87	75			
Many famous people have suffered from depression.	Incorrect	32	60	4.86	1	0.027
	Correct	119	128			

Table 5: Group difference on the score of D-Lit and Loss

	Course	n	Mean Rank	MU	Z	p
LOSS Score	Medical	151	201.47			
	Para-medical	188	144.72	9.44	-5.39	0.001
D-Lit Score	Medical	151	202.49			
	Para-medical	188	143.90	9.28	-5.53	0.001

Table 6: Relationships of Loss and D-lit score

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	p
1	(Constant)	2.938	0.258		11.382	0.001
	D-Lit Score	0.199	0.043	0.246	4.655	0.001

Dependent Variable: LOSS Score; R²=0.06, F=21.66, p=0.001

On Mann-Whitney U test Medical and paramedical had significant group differences in total score of LOSS (MU=9.442, Z=-5.393, p=0.000) and D-Lit (MU=9.288, Z=-5.531, p=0.000)(Table 5).

On linear regression analysis (R²=0.06, F=21.66, p=0.000) association LOSS score and D-Lit score was statistically significant positive ($\beta=0.246$, t=4.655, p=0.000)(Table 6).

DISCUSSIONS

To the best of our knowledge the current study is the first to examine about depression and suicide literacy among healthcare professional students. Our study confirms misconceptions and uncertainty about suicide and depression wherein both are inadequately understood. Our finding was consistent with an earlier Indian report and contrary to a Canadian report in western population who reported a higher level of literacy in non-medical population (29). Ram et al. found that even in patient with depression, depression literacy is at modest, though another study among non-depressed adolescent literacy was better (29). This inconsistency could be due to difference in methodology and assessment in these studies. However, in a Canadian report more than half the participants could correctly identify depression and women were more depression literate than men. Misperceptions observed were difficulty in differentiating depressive symptoms from other mental illnesses, estimating prevalence and identifying factors linked to suicide.

Thus inadequate literacy of depression and suicide

underscores the need of integration of mental health education in study curriculum; a recommendation made by World Health Organization for prevention of both suicide and depression. This is more so for paramedical group who tend to respond more incorrectly in most items as observed in our study. Public health awareness programs may benefit from raising awareness about suicide and the underlying associated behaviors more broadly as a means to increasing suicide and depression literacy levels. In India suicide literacy appears to be low and openly talking about suicide is socially disapproved. Similar observation is made in this study. There were more participants who agreed with the statement “Men who have thoughts about suicide should not tell others about it” in the suicide literacy questionnaire. In the absence of adequate suicide literacy, social tradition and culture appeared to play a role in responding issues related to depression and suicidality. In a collective society like India communicating about suicide is still stigmatic, people often think that talking about suicide may increase the risk of suicide by learning, and often considered that a person commits suicide due to severe mental health problem such as psychosis. Men are thought to be unlikely to commit suicide as they are thought to be psychologically resilient, caretaker of most family. This could be the reason that most participant disagree with the statement “Men are more likely to die by suicide than women”. Among Indians cognitive aspect of depression is less than somatic aspect (29). Thus they may find it difficult to acknowledge about guilt, self-confidence, and perceptual abnormality as observed in our study. They may acknowledge depression

as a serious illness that requires intensive treatment after hospitalization. In our study a statistically significant association was found between literacy of depression and suicide. It can be due to overlap of suicidality and depressive symptoms and strong association between the two. Rosenstein et al. (2016), in a meta-analysis found a positive association between suicidality and depression (30). Lifetime risk of suicide among people with untreated depression ranges from 2.2–15%. Depression is present in at least 50% of all suicides. 50–80% of older adults who die by suicide have been shown to have major depression. Those

suffering from depression are at 25 times greater risk for suicide than the general population (31). Prevention of depression is considered an important aspect of suicide prevention.

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