

## ORIGINAL ARTICLE

# Help-seeking beliefs for mental disorders among medical and nursing students

Louisa Picco<sup>1</sup> | Esmond Seow<sup>1</sup> | Boon Yiang Chua<sup>1</sup> | Rathi Mahendran<sup>2,3</sup> |  
Swapna Verma<sup>3,4</sup> | Huiting Xie<sup>5</sup> | Jia Wang<sup>5</sup> | Siow Ann Chong<sup>1</sup> | Mythily Subramaniam<sup>1</sup>

<sup>1</sup>Research Division, Institute of Mental Health, Singapore

<sup>2</sup>Psychological Medicine, National University Hospital, Singapore

<sup>3</sup>Clinical, Academic and Faculty Affairs, Duke-NUS Graduate Medical School, Singapore

<sup>4</sup>Department of General Psychiatry and Early Psychosis Intervention Programme, Institute of Mental Health, Singapore

<sup>5</sup>Nursing Administration, Institute of Mental Health, Singapore

**Correspondence**

A/Prof Mythily Subramaniam, Research Division, Institute of Mental Health, Buangkok Green Medical Park, 10 Buangkok View, 539747, Singapore.  
Email: mythily@imh.com.sg

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**Aim:** The current study aimed to investigate beliefs about help-seeking, treatment options and expected outcomes for people with alcohol abuse, dementia, depression, obsessive-compulsive disorder and schizophrenia, using a vignette-based approach, among a sample of nursing and medical students.

**Methods:** This was a cross-sectional online study among medical and nursing students ( $n = 1002$ ) who were randomly assigned 1 of 5 vignettes. Questions were asked about whom could best help the person in the vignette, the likely helpfulness of a broad range of interventions, and the likely outcome for the person in the vignette with and without appropriate help.

**Results:** A total of 45.1% of students recommended seeing a psychiatrist, which was the most common source of help reported for all 5 vignettes. Help-seeking preferences were significantly associated with age, academic year and vignette type. Respondents rated seeing a psychiatrist as the most helpful intervention (92.4%) and dealing with the problem on their own as the most harmful (68.1%). Then, 81.5% of students indicated that the condition of the person in the vignette would worsen if appropriate help was not sought.

**Conclusion:** Medical and nursing students most commonly recommended seeking help from a psychiatrist for mental health-related problems, where help-seeking preferences were associated with various age, academic year and vignette type. As these students will be the future medical and nursing workforce, they need to be equipped with the skills and ability to recognize signs and symptoms of mental illness, to aid timely and appropriate treatment for people with mental illness.

**KEYWORDS**

help-seeking beliefs, mental health literacy, Singapore, vignettes

## 1 | INTRODUCTION

Help-seeking behaviours are complex and multifactorial, where a myriad of factors can not only facilitate but also impede help-seeking. Reluctance to seek help for mental disorders is not uncommon. A national epidemiological study in Singapore reported that the treatment gap was 59.6% for major depressive disorder and as high as 96.2% and 89.8% for alcohol abuse and obsessive-compulsive

disorder (OCD), respectively (Chong et al., 2012). Various reasons have been proposed in the extant literature as to why people don't seek help for mental illness, with stigma being a significant factor (Corrigan, Druss, & Perlick, 2014). Barriers to help-seeking are often classified as person-level barriers or provider/system-level barriers. Person-level barriers comprise negative attitudes and behaviours towards help-seeking, beliefs about the ineffectiveness of treatment, limited support networks, and believing one can cope on their own,

while system-level barriers include associated costs of treatment and financial constraints, lack of insurance and confidentiality (Corrigan et al., 2014; Gulliver, Griffiths, & Christensen, 2010).

Despite these barriers, facilitators to help-seeking have also been identified including emotional competence, positive attitudes towards seeking professional help, social encouragement and support and having a positive past experience (Gulliver et al., 2010; Rickwood, Deane, & Wilson, 2007; Rickwood, Deane, Wilson, & Ciarrochi, 2005). Another facilitator is mental health literacy or an individual's knowledge and beliefs about mental disorders which aids their recognition, management or prevention (Jorm et al., 1997). A local national mental health literacy study has shown that Singaporeans frequently recommended help-seeking for mental disorders from informal sources such as family and friends, with this being the most common source of help recommended for people with alcohol abuse, depression and schizophrenia, while for dementia and OCD, the most common source of help was to see a doctor/general practitioner (GP) (Picco et al., 2016).

These findings highlight a preference to recommend help-seeking from informal sources which raises the question as to whether family and friends have the ability to recognize the signs and symptoms of mental disorders and to recommend help-seeking from professional sources. Of equal importance is the preference of many to recommend help-seeking from GPs. Primary care providers are often the first point of contact for many people with mental illness (Bristow et al., 2011) and they can also act as gatekeepers to other services. Despite this, mental health problems often go undiagnosed or undetected by primary care providers (Bor, 2015; Smith et al., 2011) which can further exacerbate health outcomes in these people.

Earlier mental health literacy studies conducted in Singapore revealed help-seeking beliefs differed across health professions. For example, in relation to depression, psychiatric nurses were less likely to endorse a pharmacist as helpful compared to general nurses, while for schizophrenia, both nursing groups endorsed seeing a psychiatrist as helpful, however, the rating was significantly higher among psychiatric nurses (Yeo et al., 2001). Parker, Chen, Kua, Loh, and Jorm (2000) assessed the mental health literacy of psychiatrists, psychiatric and general nurses and allied health staff, where they compared responses between the psychiatrists with all the other health professionals. While both groups endorsed seeing a psychiatrist as being extremely helpful, the non-psychiatrists (ie, nurses and allied health staff) were more likely to rate other sources such as counsellors and family and friends more highly.

Far less is known about the mental health literacy of medical and nursing students in Singapore. Studies in Australia have revealed that nursing students or nurses entering the workforce have low levels of mental health literacy that are comparable to the general population (Council of Australian Governments, 2009; McCann, Lu, & Berryman, 2009). Improving mental health literacy among nursing and medical students may not only reduce stigma but also aid in timely and appropriate treatment for people with mental health problems. Various interventions, particularly relating to mental health first aid training, have been shown to increase mental health literacy among medical and nursing students (Bond, Jorm, Kitchener, & Reavley, 2015). Similarly, a pilot study among nursing students participating in mental health clinical placements found that students reported a greater

understanding of mental healthcare and improved practical skill levels (Ward, 2011), highlighting the importance of mental health literacy among this future group of mental health professionals.

To address this gap in knowledge on the mental health literacy of nursing and medical students in Singapore, the current study aimed to investigate beliefs about help-seeking, treatment options and expected outcomes for people with alcohol abuse, dementia, depression, OCD and schizophrenia, using a vignette-based approach, among a sample of nursing and medical students. It was hypothesized that students would most commonly recommend seeking help from professional sources, particularly mental health professionals such as a psychiatrist or psychologist, as opposed to informal sources such as family or friends.

## 2 | METHODS

### 2.1 | Study participants

Nursing students enrolled in 4 nursing institutions and medical students from 2 medical schools in Singapore were invited to participate in the study. Students were informed of the study via email or via teaching staff who assisted in disseminating information about the study during teaching sessions. A total of 500 nursing students and 502 medical students were recruited between April and September 2016. To ensure adequate representation across institutions and academic year levels, quota limits were set. The study was also limited to Singapore citizens and permanent residents, aged 16 to 35 years (which is representative of students' age). Implicit informed consent was obtained and the survey was administered via an online platform. Ethical approval for the study was granted from the relevant institutional review board (National Healthcare Group, Domain Specific Review Board).

### 2.2 | Survey

A structured questionnaire was used to gather socio-demographic information on the respondent's age, gender, ethnicity, marital status and education, in addition to information relating to the mode of their training in psychiatric nursing/medicine (eg, lecture and small group teaching, clinical placement). Mental health literacy was determined using a vignette-based approach, and was modelled on the Depression Literacy Questionnaire by Jorm et al. (1997) and that of a recent national mental health literacy study in Singapore (Chong et al., 2016). Vignettes described a person with 1 of 5 mental disorders: alcohol abuse, dementia, depression, OCD or schizophrenia, and were randomly assigned to respondents. All vignettes reflected Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) and International Classification of Diseases, Tenth Revision (ICD-10) diagnostic criteria for the 5 disorders and were written in conjunction with local experts in each of the disorders. A copy of these vignettes is attached in File S1, Supporting Information.

After reading the vignette, respondents were asked a series of questions relating to the person in the vignette. This included 1 open text question: "Who do you think could BEST help X?", which was

used to ascertain help-seeking beliefs. In addition, students were also asked to indicate the likely helpfulness of 31 different interventions to the person in the vignette, rating these as either “helpful,” “harmful” or “neither.” Finally, in order to gather information relating to beliefs about outcomes for people with mental illness, respondents were asked to indicate the likely outcome for the person in the vignette with and without seeking professional help. Response options included: full recovery with no further problems, full recovery but problems may come back, partial recovery but problems may come back, no improvement, get worse and don't know.

### 2.3 | Coding

Three members of the research team (ES, MS and LP) jointly coded the open text responses in relation to help-seeking beliefs, where coders classified the responses into different categories. Responses were coded as: (1) see a psychiatrist, (2) see a psychologist, (3) seek help from a mental health professional or service, (4) see a counsellor or have counselling, (5) see a doctor/GP, (6) see a non-mental health-care professional, (7) seek help from family or friends and (8) talk to someone. Responses endorsed by less than 3% of the entire sample were coded as “other” and comprised manage on your own, take medications, self-help methods, support groups, hypnosis, religious advisor or organization and telephone helpline, while some respondents indicated they didn't think the person in the vignette had a problem.

### 2.4 | Statistical analysis

Statistical analyses were performed using IBM SPSS, version 23.0. Descriptive statistics were tabulated for the overall sample and stratified by the type of vignette received. Frequency and percentage were calculated for categorical variables, while mean and SD were calculated for continuous variables. Responses to the open-ended question on how the person in the vignette could best be helped were categorized into 3 outcome levels for help-seeking beliefs—“psychiatric help” (which included psychiatrists, psychologists, mental health professionals/services and seeing a counsellor/have counselling), “medical help” (which comprised doctor/GP and other non-mental healthcare professionals) and “informal help” (including family/friends, talking to someone and those responses coded as “other,” which were endorsed by less than 3% of the sample). A multinomial logistic regression was then run to explore the relationship between predictor variables and help-seeking preferences. Statistical significance was set at  $P < .05$  level with 2-sided tests.

## 3 | RESULTS

The sample characteristics of the students are displayed in Table 1. The majority of the sample were female (71.1%), Chinese (75.2%) and currently undertaking an undergraduate qualification (48.2%). The mean age of the sample was 21.27 years (SD 3.28). Table 2 shows the sources of help identified by students in response to the open text question relating to help-seeking recommendations for the person in the vignette. “See a psychiatrist” was the most common source of help

**TABLE 1** Socio-demographic characteristics of the study sample ( $n = 1002$ )

		Mean 21.27 N	SD 3.28 %
Age in years			
Gender	Male	290	28.9
	Female	712	71.1
Ethnicity	Chinese	754	75.2
	Malay	141	14.1
	Indian/others	107	10.7
Current education	Technical	100	10.0
	Diploma	300	29.9
	Undergraduate	483	48.2
	Postgraduate	119	11.9
Student group	Nursing	500	49.9
	Medical	502	50.1
Academic year	First	279	27.8
	Second	282	28.1
	Third	173	17.3
	Fourth	150	15.0
	Fifth	118	11.8
Lecture and small group teachings	Yes	606	60.5
	No	396	39.5
Clinical placement	Yes	492	49.1
	No	510	50.9
Vignette	Alcohol abuse	200	20.0
	Depression	200	20.0
	Dementia	201	20.1
	OCD	201	20.1
	Schizophrenia	200	20.0
Experience dealing with someone having problems similar to person in vignette	No	664	66.3
	Yes	338	33.7
Friends and family with problems similar to person in vignette	No	750	74.9
	Yes	252	25.1

reported for all five vignettes with slightly under half of the entire sample (45.1%) recommending the person in the vignette seek help from a psychiatrist.

Significant socio-demographic differences were associated with help-seeking preferences, where psychiatric help (ie, help from a psychiatrist, psychologist, mental health professional/service and seeing a counsellor/have counselling) was used as the reference group (Table 3). For example, older students were less likely to recommend seeking informal help from sources such as family or friends. Differences in help-seeking beliefs were also observed by academic year and across vignettes. Students in second to fifth year (vs first year) were less likely to recommend seeking informal help, while fifth-year students were also less likely to recommend help-seeking from medical sources (such as a doctor/GP or medical social worker), when compared to psychiatric help. Students were more likely to recommend seeking informal help for depression, dementia and alcohol abuse (vs schizophrenia), while medical help was more likely to be recommended for dementia, yet less likely to be recommended for alcohol abuse and OCD.

**TABLE 2** Sources of help recommended by students in response to an open-ended question about how the person in the vignette could best be helped

Recommended source of help	Alcohol abuse (n = 200) (%)	Dementia (n = 201) (%)	Depression (n = 200) (%)	OCD (n = 201) (%)	Schizophrenia (n = 200) (%)	Total (n = 1002) (%)
See a psychiatrist	35.5	34.3	39.5	59.7	56.5	45.1
See a psychologist	3.5	2.5	5.5	2.5	5.5	3.9
See a mental health professional/service	9.0	7.0	2.5	10.9	9.5	7.8
See a counsellor, or have counselling	16.5	2.5	8.0	6.5	5.0	7.7
See a doctor/ GP	2.0	20.4	1.5	2.5	4.0	6.1
See a non-mental healthcare professional	1.0	5.5	3.0	1.5	5.5	3.3
Talk to family or friends	16.0	18.4	26.0	7.0	6.0	14.7
Talk to someone	3.5	0.5	8.0	1.0	2.5	3.1
Others	13.0	9.0	6.0	8.5	5.5	8.4

Table 4 summarizes how students rated specific help-seeking interventions, labelling these as either "helpful" or "harmful." Across vignettes, seeing a psychiatrist (92.4%) and a psychologist (85.7%) were viewed as the most helpful interventions, while dealing with their problems on their own (68.1%) and taking sleeping pills (47.0%) were viewed as the most harmful.

Table 5 shows students' views about the likely outcome if the person in the vignette did and did not to seek appropriate help. With the exception of the dementia vignette, the most frequently reported outcome if appropriate help were sought was "full recovery but problems may come back." For all 5 vignettes, "get worse" was considered the most likely outcome if appropriate help was not sought.

## 4 | DISCUSSION

The current study examined beliefs about help-seeking, treatment options and outcomes for people with alcohol abuse, dementia, depression, OCD and schizophrenia, among nursing and medical students in Singapore. Across all 5 vignettes, the most commonly recommended source of help was to see a psychiatrist, which was endorsed by 45.1% of students; however, endorsement varied considerably across disorders, where endorsement was highest for OCD (59.7%). It is difficult to postulate why there would be greatest endorsement to see a psychiatrist for OCD, when compared to the other disorders and or other help-seeking sources. One possible explanation could be related to recognition; given there was high recognition of OCD among medical (87.1%) (Picco et al., 2017) and nursing students (86%) (Seow et al., 2017), particularly when compared to the general population (28.7%) (Chong et al., 2016), this suggests students have an understanding of the complexities in treating OCD, which requires professional psychiatric treatment. For depression, alcohol abuse and dementia, while seeing a psychiatrist was still the most common source of help reported, only 39.5%, 35.5% and 34.3%, respectively, recommended this. Contrastingly, population studies both locally and internationally consistently find a preference to seek help from either informal sources such as family or friends or more general health professionals such as a GP for various mental health problems (Jorm, 2000; Picco et al., 2016) as do studies among university students (Reavley, McCann, & Jorm, 2012). This student population is better

educated in mental health-related issues, not just in terms of education level but also because their chosen course is nursing/medicine, and therefore it is expected that they would be able to better recognize mental disorders, compared to the general population (Chong et al., 2016; Seow et al., 2017).

Various correlates of help-seeking beliefs were identified including student's age and their year level, while differences were also observed across vignettes. First, older students were less likely to recommend seeking informal help from sources such as family and friends, compared to psychiatric help (eg, psychiatrist or psychologist). Similarly, a mental health literacy study among university students in Australia also found the intention to seek help from informal sources decreased with age (Reavley et al., 2012). Students in second to fifth year were significantly more likely to recommend seeking psychiatric help (vs informal help), while students in fifth year were also more likely to recommend help-seeking from psychiatric sources (compared to medical help, such as a doctor/GP). This correlation is not surprising and is probably the result of training and the course curricula as well as exposure to and experience in dealing with people who have a mental illness. Interestingly, however, the same regression analysis did not find clinical placement or type of education to be a significant predictor of help-seeking beliefs, and therefore irrespective of the type of institution the medical and nursing students are attending, it is the number of years of education that is the strongest predictor of help-seeking beliefs.

Analyses also revealed that the vignette type was a predictor of help-seeking beliefs. When compared to schizophrenia, those assigned the alcohol abuse, dementia and depression vignettes, were significantly more likely to recommend seeking informal help compared to psychiatric help. Previous research has consistently reported that Asians prefer to seek help from informal sources (Atkinson, Lowe, & Matthews, 1995; Liu, Gerdtz, & Liu, 2011; Yeh, 2002), highlighting the importance of cultural beliefs relating to mental health help-seeking. For dementia, there was also a preference to seek medical help, particularly from a doctor or GP, which could be a consequence of the ambiguity surrounding the classification of dementia as a neurological or psychiatric disorder (David & Nicholson, 2015) and therefore the preference to seek help from sources which are not specific to psychiatry. Interestingly, for alcohol abuse, while students were significantly more likely to recommend help-seeking from

**TABLE 3** Predictors of type of help recommended by the students<sup>a</sup>

Variable	Medical help			Informal help		
	OR	95% CI	P-value	OR	95% CI	P value
Age in years	1.05	0.95-1.16	0.347	0.91	0.84-0.99	<b>.034</b>
<i>Gender</i>						
Male	0.80	0.47-1.39	0.433	1.02	0.72-1.46	.899
Female	Ref.	—	—	Ref.	—	—
<i>Ethnicity</i>						
Chinese	Ref.	—	—	Ref.	—	—
Malay	1.26	0.59-2.68	0.559	1.24	0.75-2.06	.400
Indian/others	0.63	0.27-1.45	0.275	0.98	0.57-1.69	.939
<i>Current education</i>						
Technical	1.74	0.37-8.25	0.488	0.41	0.13-1.35	.144
Diploma	1.28	0.30-5.50	0.740	0.56	0.19-1.64	.289
Undergraduate	1.28	0.47-3.49	0.630	0.55	0.26-1.15	.110
Postgraduate	Ref.	—	—	Ref.	—	—
<i>Student group</i>						
Nursing	Ref.	—	—	Ref.	—	—
Medical	1.02	0.43-2.42	0.959	1.15	0.64-2.08	.636
<i>Academic year</i>						
First	Ref.	—	—	Ref.	—	—
Second	0.63	0.34-1.18	0.149	0.65	0.44-0.95	<b>.028</b>
Third	0.87	0.43-1.77	0.702	0.45	0.27-0.75	<b>.002</b>
Fourth	0.64	0.29-1.41	0.266	0.37	0.21-0.67	<b>.001</b>
Fifth	0.26	0.08-0.82	<b>0.022</b>	0.42	0.21-0.82	<b>.011</b>
<i>Lecture and small group teachings</i>						
Yes	Ref.	—	—	Ref.	—	—
No	0.95	0.44-2.05	0.901	1.00	0.61-1.64	.988
<i>Clinical placement</i>						
Yes	0.96	0.47-1.92	0.897	0.88	0.56-1.40	.592
No	Ref.	—	—	Ref.	—	—
<i>Vignette</i>						
Schizophrenia	Ref.	—	—	Ref.	—	—
Alcohol abuse	0.34	0.13-0.90	<b>0.029</b>	2.91	1.73-4.89	<b>&lt;.001</b>
Dementia	4.97	2.70-9.15	<b>&lt;0.001</b>	3.09	1.81-5.29	<b>&lt;.001</b>
Depression	0.72	0.31-1.70	0.458	3.76	2.23-6.32	<b>&lt;.001</b>
OCD	0.38	0.16-0.91	<b>0.030</b>	1.19	0.68-2.08	.554
<i>Experience dealing with someone having problems similar to person in vignette</i>						
Yes	0.91	0.54-1.52	0.705	1.20	0.86-1.69	.288
No	Ref.	—	—	Ref.	—	—
<i>Friends and family with problems similar to person in vignette</i>						
Yes	0.60	0.33-1.09	0.095	0.93	0.64-1.34	.682
No	Ref.	—	—	Ref.	—	—

<sup>a</sup> The reference for all comparisons was "Psychiatric Help." Bold = significance set at P < .05.

informal sources they were also less likely to recommend seeking medical help. It is possible that some students perceived alcohol abuse more as a social problem which consequently influenced their help-seeking beliefs. An earlier study among a representative sample of GPs in Singapore found that serious mental illness like addictions were regarded as the most difficult psychiatric conditions to manage in a GP setting, with lack of adequate time and support from ancillary healthcare professionals, and need for training in the special medical

needs of patients with more serious mental illness being perceived as the key challenges faced by GPs in managing these patients (Vaingankar et al., 2010)—this may explain why medical and nursing students were less likely to recommend seeking medical help for alcohol abuse. Finally, for OCD, seeking medical help was significantly less likely (compared to psychiatric help). This is not surprising given that 79.6% of students recommended seeking psychiatric help (ie, which comprised psychiatrists (59.7%), psychologists (2.5%), mental health

TABLE 4 Percentage of students rating interventions as “helpful” and “harmful” for the person in the vignette

Intervention	Alcohol abuse		Dementia		Depression		OCD		Schizophrenia		Total	
	Helpful	Harmful	Helpful	Harmful	Helpful	Harmful	Helpful	Harmful	Helpful	Harmful	Helpful	Harmful
<i>Persons</i>												
Psychiatrist	91.5	1.5	87.1	1.0	91.5	7.5	95.0	1.0	97.0	1.0	92.4	0.9
Psychologist	88.0	1.5	73.1	1.5	85.0	0.5	91.5	5.5	91.0	1.0	85.7	0.9
Licensed professional counsellor	90.5	1.0	64.2	3.0	88.0	–	83.6	1.0	79.5	4.0	81.1	1.8
Close family	83.5	5.0	75.1	3.5	85.5	1.5	75.6	5.0	75.0	7.5	78.9	4.5
Close friends	75.5	8.0	71.1	6.5	79.0	3.5	68.2	5.5	68.5	8.5	72.5	6.4
Social worker	67.0	3.5	54.7	4.0	57.5	2.0	50.7	3.5	74.0	3.0	60.8	3.2
Doctor/general practitioner	48.5	7.0	70.6	1.0	47.5	4.0	56.7	3.0	48.5	5.0	54.4	4.0
Seek help from religious advisors like priest, pastor, or Ustadh	57.0	11.5	37.3	13.4	55.5	11.0	34.3	11.9	33.5	19.0	43.5	13.4
Traditional Chinese medicine practitioner or Jamu/Ayurvedic-based treatment	10.0	27.0	11.9	28.4	6.5	26.5	12.4	22.9	8.5	36.5	9.9	28.2
<i>Medications</i>												
Antianxiety medication	30.5	23.5	31.8	22.9	33.5	19.5	53.2	11.9	49.0	10.0	39.6	17.6
Antidepressant medication	37.5	20.0	30.3	23.4	53.5	14.5	36.3	16.9	38.0	13.0	39.1	17.6
Antipsychotic medication	24.0	28.5	22.4	31.3	21.0	29.0	24.9	24.9	72.5	4.0	32.9	23.6
Supplements	34.0	4.5	33.3	3.5	22.0	7.5	16.4	4.5	22.5	7.0	25.6	5.4
Sleeping pills	10.5	52.5	10.4	51.7	18.0	46.0	9.5	42.8	11.5	42.0	12.0	47.0
Tonics or herbal medicines	13.0	20.0	11.4	18.9	12.5	16.5	6.5	21.9	6.5	21.5	10.0	19.8
Antibiotics	8.0	42.0	6.5	41.8	4.5	44.0	5.5	50.2	4.0	44.0	5.7	45.4
<i>Others</i>												
Course on relaxation/stress management	89.0	–	73.6	2.5	84.5	0.5	77.1	2.5	78.0	1.0	80.4	1.3
Become more physically more active	91.5	1.0	74.6	3.5	87.0	3.0	65.7	2.0	71.5	1.5	78.0	2.2
Read about others who have dealt with similar issues	77.0	2.5	81.1	4.0	72.0	5.0	82.1	2.0	73.0	6.5	77.0	4.0
Yoga and/or meditation classes	85.0	2.5	68.2	2.0	80.5	1.0	67.7	–	66.0	3.5	73.5	1.8
Calling a telephone hotline	65.0	6.0	53.7	9.0	65.0	5.5	60.2	7.0	65.0	6.5	61.8	6.8
Cut out alcohol altogether	66.5	18.0	58.7	8.5	49.0	8.0	42.8	6.0	59.0	6.0	55.2	9.3
Get out more/be more social	33.0	26.5	46.8	9.0	40.0	15.5	42.3	9.0	42.5	18.0	40.9	15.6
Contact an expert via email or website	34.5	20.5	35.3	21.9	39.5	22.0	43.8	17.9	33.0	22.0	37.2	20.9
Get information from websites	36.0	31.5	35.3	31.3	26.5	38.0	45.3	16.4	30.0	34.5	34.6	30.3
Have an occasional alcoholic drink to relax	39.5	29.0	23.4	27.4	28.0	31.0	28.4	19.9	21.5	36.0	28.1	28.6
Be admitted to an institution for example, hospital	31.0	29.5	20.9	43.3	13.5	34.0	21.9	28.4	51.0	13.0	27.6	29.6
Go on a special diet or avoid certain foods	24.0	14.5	19.9	17.9	11.5	31.0	12.4	17.9	18.5	17.5	17.3	19.8
Receive electroconvulsive therapy	11.0	29.0	9.0	30.8	13.0	26.0	16.4	32.8	29.0	22.0	15.7	28.1
Receive hypnosis	16.0	19.0	8.0	28.4	13.5	25.5	17.4	22.9	22.0	19.5	15.4	23.1
Deal on his/her own	10.5	67.0	8.0	74.6	8.5	69.5	11.9	59.2	7.5	70.0	9.3	68.1

**TABLE 5** Percentage of students citing the likely outcome if the person in the vignette did or did not seek professional help

Likely results	Alcohol abuse	Dementia	Depression	OCD	Schizophrenia	Total
<i>With professional help</i>						
Full recovery with no further problems	12.5	1.5	7.0	9.0	6.5	7.3
Full recovery but problems may come back	65.0	30.8	60.5	56.2	43.5	50.6
Partial recovery but problems may come back	21.0	53.2	28.0	27.4	40.0	33.9
No improvement	0.5	5.5	1.0	3.0	1.5	2.3
Get worse	3.0	6.5	1.0	2.0	4.5	3.4
Do not know	1.0	2.5	2.5	2.5	4.0	2.5
<i>Without professional help</i>						
Full recovery with no further problems	0.5	—	—	—	—	0.1
Full recovery but problems may come back	0.5	0.5	0.5	—	—	0.3
Partial recovery but problems may come back	1.5	2.0	4.5	3.0	—	2.2
No improvement	9.5	10.4	12.0	21.9	13.5	13.5
Get worse	87.0	84.6	81.5	71.6	83.0	81.5
Do not know	1.0	2.5	1.5	3.5	3.5	2.4

professionals/services (10.9%) and seeing a counsellor/have counselling (6.5%), suggesting a greater awareness of OCD as a mental illness. An earlier population-wide study in Singapore found the prevalence of OCD to be 3% (Subramaniam et al., 2012), a figure that is higher than that reported in several other studies elsewhere, and consequently efforts have been made to increase public awareness. Given that help-seeking preferences differed by vignette, and very few studies have explored help-seeking beliefs particularly in relation to OCD and alcohol abuse, additional research exploring mental health literacy relating to these mental illnesses is warranted.

Seeking help from a psychiatrist (92.4%) and psychologist (85.7%) were endorsed as the most helpful interventions for the person in the vignette and were not dissimilar to findings observed among the general population in Singapore (Picco et al., 2016). Medical and nursing students also frequently endorsed the helpfulness of various medications, particularly antidepressants for those with depression (53.5%), anti-anxiety medication for those with OCD (53.2%) and antipsychotics for those with schizophrenia (72.5%). While these findings are in line with those of psychiatrists and psychiatric nurses in an earlier study exploring mental health literacy relating to depression, mania and schizophrenia (Parker, Mahendran, Yeo, Loh, & Jorm, 1999), endorsement by these mental health professionals was much higher than that of the students. For example, in relation to the depression vignette, 84% of psychiatrists indicated it would be helpful to take antidepressants while 100% endorsed antipsychotics to be helpful for schizophrenia (Parker et al., 1999). There are several possible explanations for why medical and nursing students less frequently endorsed the helpfulness of such medications compared to psychiatrists. The first is that this is a possible reflection of the curricular particularly in relation to the nursing courses, which do not specifically focus on psychiatric medications and how these are used to treat and reduce symptoms for people with mental illness. Second, medical and nursing students have had less exposure and clinical experience in managing patients with mental illness.

Students were asked to indicate the likely outcome of the person in the vignette with and without seeking appropriate help. Similar to findings among the general population (Picco et al., 2016), students

most frequently reported that if appropriate help was sought, the most likely outcome would be a “full recovery but problems may come back,” with the exception of dementia, where the most common response was “partial recovery but problems may come back.” Students were less likely than the general population to indicate a “full recovery with no further problems” (7.3% vs 19.6%), which may be attributed to their better knowledge about mental illnesses resulting from their education and training. Responses to the question relating to outcomes for people with mental illness who do not seek appropriate help corresponded to those of the general population in both Singapore (Picco et al., 2016) and Australia (Reavley & Jorm, 2011a, 2011b), where the majority indicated the person in the vignette would get worse.

The findings from this study should be viewed in light of the following limitations. First, the vignettes used describe classic symptoms of each of the 5 disorders but may not describe all symptoms or reflect real life cases. It is also possible that students provided socially desirable responses rather than their preferred responses relating to help-seeking, treatment options and outcomes for people with mental illness. While medical and nursing students were recruited from various institutions, the findings may not be representative of all medical and nursing students in Singapore. With regards to coding the open text responses, some assumptions were made; for example, “talk to someone” comprised responses such as “talk to people around him,” “talk to him” and “just speak to him,” which were later classified as “informal help,” however, it is possible respondents were referring to other sources of help, such as professional help. Finally, respondents were asked to indicate the helpfulness or harmfulness of specific interventions; however, these were not hierarchically organized and therefore do not represent the extent to which interventions are prioritized.

Despite these limitations, this study recruited a good sample size of medical and nursing student from 6 different institutions. It also adopted a similar protocol to that of a local national mental health literacy study (Chong et al., 2016) allowing for comparisons to be made between the general population. To the best of our knowledge, this is also the first study to explore mental health literacy and more specifically beliefs relating to help-seeking, treatment options and outcomes

among medical and nursing students with varying years of training, education and exposure to psychiatric placements.

Mental health literacy has the potential to improve mental health at the individual and population level (Kelly, Jorm, & Wright, 2007). More specifically, mental health knowledge is a predictor to seek help for mental health problems (Henderson, Evans-Lacko, & Thornicroft, 2013; Rusch, Evans-Lacko, Henderson, Flach, & Thornicroft, 2011) and reemphasizes the importance of individuals having adequate mental health literacy. It is imperative that this knowledge be imparted to medical and nursing students where most would be at the front line of health care and hence need to be equipped with the skills and ability to recognize signs and symptoms of mental illness and recommend and provide appropriate help. Due consideration must also be given to the timing and number of hours spent on mental health-related syllabus (McCann et al., 2009) to ensure the adequate training of these future health care professionals.

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## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.

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