

## Pharmacists' Knowledge, Beliefs and Attitudes towards Mental Health Illness in Johor, Malaysia – Mental Health Literacy Survey (2018)

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### Abstract

**Introduction:** Mental health literacy is defined as the knowledge and beliefs about mental disorders which aid their recognition, management and prevention.

**Objectives:** To determine the mental health literacy of pharmacists in Johor and identify the demographic factors that influence pharmacists' mental health literacy.

**Methods:** A cross-sectional study was conducted from March to June 2018 on pharmacists in Johor using an adapted questionnaire. Questionnaire with either one of the depression vignette or schizophrenia vignette was sent to the respondents randomly. There were three domains in the questionnaire, which included identification of mental illness, helpfulness of interventions and long-term outcome of mental illness.

**Results:** A total of 109 and 91 responses were received for the depression and schizophrenia vignettes respectively, representing an overall response rate of 83.0%. Depression was correctly identified by 56.0% (n=61) of respondents from the depression vignette whereas schizophrenia was correctly identified by 68.1% (n=62) of pharmacists from the schizophrenia vignette. Younger pharmacists (29 years old and below) were significantly more likely to be able to identify depression correctly (p=0.013), whereas older pharmacists were significantly more likely to identify schizophrenia correctly (p=0.049). For long term recovery, older (p=0.017) and more experienced pharmacists (with more than four years working experience) (p=0.007) significantly rated that person with schizophrenia may get worse if no professional help was sought. Overall, older and more experienced pharmacists were found to have higher degree of mental health literacy in most domains such as the ability to identify professional intervention, proper medication, harmful lifestyle and long-term recovery.

**Conclusion:** Pharmacists in Johor were less able to identify common mental illness. With the increasing prevalence of mental health illness in Malaysia, pharmacists, especially the young and less experience ones, should receive more training and education to improve their mental health literacy.

**Keywords:** mental health literacy, schizophrenia, depression, pharmacists, demographic factor

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### Introduction

Based on the National Health and Morbidity Survey 2015, increasing trend of mental health problem was observed from 1996 (10.7) to 2015 (29.2) in Malaysia (1). However, discrimination among the society towards people with mental health illness are common due to the misunderstanding of the illness and feeling ashamed to seek for professional help. Hence, the concept of mental health literacy was introduced by Jorm *et al.* in 1997. He defined mental health literacy as the "knowledge and beliefs about mental disorders which aid their recognition, management and prevention" (2 p.182). Mental health literacy comprised of the ability to recognize specific illness, knowledge and belief about causes and risk factors, self-help intervention and professional help available, as well as the attitude during recognition and appropriate help-seeking (2). As the prevalence of mental health illness increases over the years, pharmacists' interactions with mentally ill patients also increase. The role of pharmacists in providing pharmaceutical services in the healthcare setting cannot be denied and hence their attitude towards mentally ill patients as well as belief on treatments and outcomes of mental health illness is important.

While a number of studies about mental health literacy among the public, healthcare students and other healthcare professionals were recorded over the years, only a few studies were assessing mental health literacy among the pharmacists. Literature about mental health literacy among the pharmacists or pharmacy students was even more limited in Asia. Available literature reported mixed results in terms of the mental health literacy of the pharmacists. In a study conducted among the Japanese pharmacy students, the attitudes of pharmacy students towards mental illness were generally favourable. However, the study's participants were restricted to only one pharmacy school, which cannot represent all pharmacy students in Japan (3). A mental health stigma study among the pharmacy students in six countries reported that pharmacy students in India thought mentally ill patients will never recover (4).

Cates *et al.* reported that Alabama pharmacists showed positive attitudes towards patients with mental health illness. About 30-50% of them felt comfortable to perform pharmaceutical services to mentally ill patients. Cates *et al.* also measured the association between demographic factors and mental health literacy of pharmacists. Three groups of pharmacists felt more comfortable and confident when providing pharmaceutical care to mentally ill patients, namely male pharmacists, pharmacists more than 50 years old and those who practiced for more than 30 years (5). The study of Yakubu *et al.* in Nigeria showed slightly positive attitudes of pharmacists towards mentally ill patient and, in their opinions, mentally ill patients are harmless and cannot be blamed for their disease (6). In Australia, a generally high degree of mental health literacy was found among the pharmacists. Despite of this, they perceived electroconvulsive therapy (ECT) and hospital admission as not helpful as they feel no improvements will be observed in schizophrenia patients. However, it was noted that younger pharmacists had significantly positive view towards ECT though the focus of current pharmacy programmes emphasize more on pharmacological management (7).

In contrast, the findings by Morral *et al.* in 2017 showed that British community pharmacists were more comfortable to provide pharmaceutical care to patient with cardiovascular disease than mental health illness. Many of them had stigma and misperceptions towards schizophrenia and bipolar disorder. The results also showed that British pharmacists had higher degree of literacy about depression than schizophrenia and bipolar disorder (8). Phokeo *et al.* also reported that Toronto pharmacists felt less comfortable to discuss about symptoms and medications with mentally ill patients compared to patients with cardiovascular disease (9). Both British and Canadian studies mentioned that inadequate training during undergraduate might be the reason behind (8,9).

To date, there was no study about mental health literacy among the pharmacist population in Johor, Malaysia. As the stigma on mental illness and mental health literacy among the pharmacists can affect their decisions in pharmaceutical care (8), this study was carried out to determine the degree of mental health literacy among the pharmacists in Johor, as well as to identify demographic factors that influence the mental health literacy of pharmacists.

## Methods

This was a cross-sectional study that was carried out from March to June 2018 in Johor, Malaysia, using a questionnaire that was adapted from the National Survey of Mental Health Literacy and Stigma (Main Survey 15+) Version 8, 2011 (2). Permission from the author was obtained to use and modify the questionnaire. As the original questionnaire was conducted through phone calls, all questions were adapted and arranged in the form of multiple choices, short answer or tick-box grid to allow for self-administration by the respondents.

This questionnaire consisted two sections. Section 1 consisted six questions about the demographic information of participants, such as age, gender, current site of practice, working experience and experience with mental illness. In section 2, there were a total of 21 questions with either one of the two different vignettes, which were depression vignette and schizophrenia vignette (Figure 1). Questionnaire with either one of the vignettes was sent to the respondents randomly.

The questions in Section 2 were classified into three domains, which included identification of mental illness, helpfulness of interventions and long-term outcome of mental illness. Questions about the identification of mental illness were used to determine the knowledge of respondent on their ability to identify symptoms of specific mental health illness (depression or schizophrenia) and how the mentally ill could be best helped. In the second domain, helpfulness of various interventions or management in mental illness was documented in order to determine the knowledge, belief and attitude of respondents on the helpfulness of various self-help or professional help available. Questions in the domain of long-term outcomes evaluated

the attitude and belief of pharmacists on the probability of long-term recovery and functioning among mentally ill, as well as the acceptance and discrimination of mentally ill among the society.

Figure 1: Illustration of the depression vignette and early schizophrenia vignette in the questionnaire.

Depression Vignette
<p><i>John is 30 years old. He has been feeling unusually sad and miserable for the last few weeks. Even though he is tired all the time, he has trouble sleeping nearly every night. John doesn't feel like eating and has lost weight. He can't keep his mind on his work and puts off making decisions. Even day-to-day tasks seem too much for him. This has come to the attention of his boss, who is concerned about John's lowered productivity.</i></p>
Schizophrenia Vignette
<p><i>John is 24 and lives at home with his parents. He has had a few temporary jobs since finishing school but is now unemployed. Over the last six months he has stopped seeing his friends and has begun locking himself in his bedroom and refusing to eat with the family or to have a bath. His parents also hear him walking about his bedroom at night while they are in bed. Even though they know he is alone, they have heard him shouting and arguing as if someone else is there. When they try to encourage him to do more things, he whispers that he won't leave home because he is being spied upon by the neighbour. They realize he is not taking drugs because he never sees anyone or goes anywhere.</i></p>

The study was approved by the Ministry of Health (MOH) Medical Research and Ethics Committee. Using the Kish. L (1965) method (10), the calculated sample size for this study was 241. An approval letter from the Pharmaceutical Services Division, Johor State Health Department, MOH was obtained in order to collect details of pharmacists who were registered under Registration of Pharmacists Act 1951 and Registration of Pharmacist Regulation 2004 and currently working in Johor, Malaysia. The email addresses of public sector pharmacists were obtained from the Drug Information Services of government hospitals and district health offices. For pharmacists who worked in the private setting, their email addresses were obtained from the Official Portal of Pharmaceutical Services Programme, MOH (11). A total of 771 pharmacists' email addresses were identified, listed and assigned with a sequential number. Random numbers were generated using Microsoft Excel to select 241 email addresses. The questionnaire containing the depression and schizophrenia vignette were sent out alternately to ensure equal sample size between the two groups. A reminder email was sent two weeks after the initial e-mail to those who had not yet responded. If the recipient failed to respond to the survey after two times of reminder email, an email address was randomly selected again from the pool of email addresses that were not chosen previously.

Data was analysed using the Statistical Package for Social Science (SPSS) version 22.0. The data were analysed using Mann Whitney U test to identify demographic factors that influence mental health literacy of pharmacists in both the depression and schizophrenia vignettes. Findings with P-value less than 0.05 was considered as statistically significant. For demographic factors with continuous variables like age and years of experience, the respondents were grouped into two categories for the analysis, which were less than and greater than the median age, and less than and greater than median years of working experience.

## Results

### Demographics

A total of 200 responses were received, representing a response rate of 83.0%. Figure 2 showed the simplified flow of data collection. The median age of the respondents was 29 years old (interquartile range (IQR) 27-31 years) and the median year of working experience as pharmacist was 4 years (IQR 2-7 years). Most of the respondents were female (75.2% for depression vignette and 76.9% for schizophrenia vignette) and their main area of practice were government hospital (80.7% for depression vignette and 83.5% for schizophrenia vignette). For depression vignette, 31.2% of respondents described having family experience with mental illness and 17.4% described having personal experience with mental illness. For schizophrenia vignette, 29.7% reported had at least one family member who experience mental illness and 6.6% reported having personal experience with mental illness (Table 1).

*Identification of Mental Illness*

Depression was correctly identified by 56.0% (n=61) of pharmacists from the depression vignette whereas schizophrenia was correctly identified by 68.1% (n=62) of pharmacists from the schizophrenia vignette. The numbers of respondents who were able to identify the vignettes correctly were presented in Table 2. It was found that younger pharmacists were significantly more likely to be able to identify depression correctly (p=0.013), whereas older pharmacists were significantly more likely to identify schizophrenia correctly (p=0.049).

Figure 2: Flow of the study

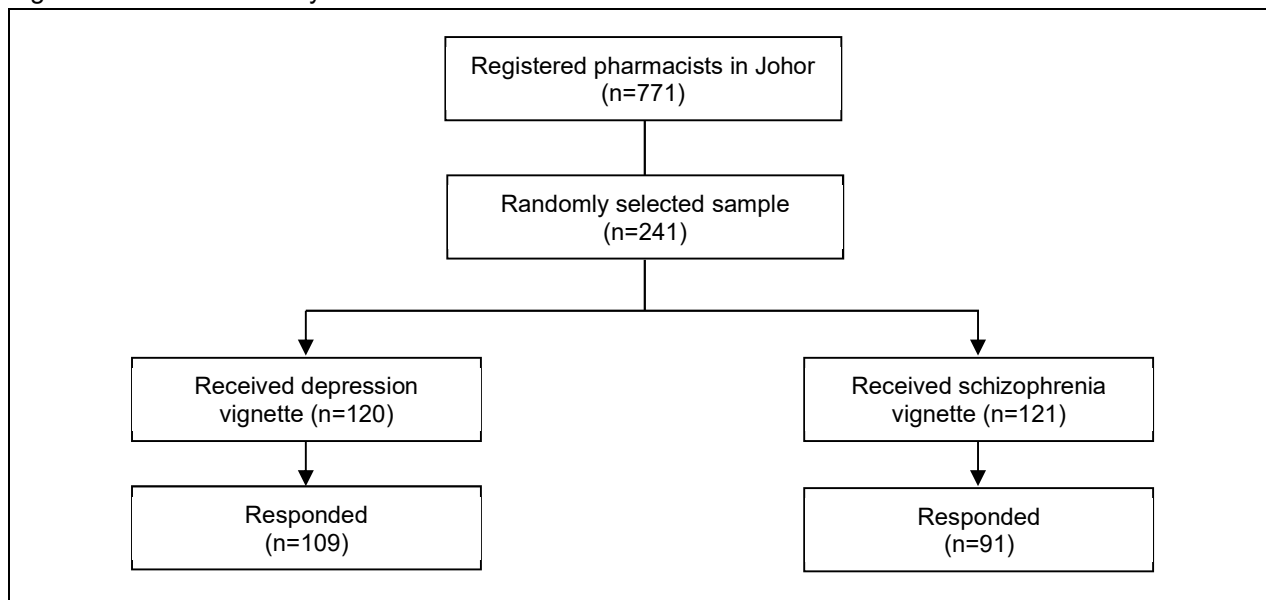


Table 1: Demographics of survey respondents (n=200)

Demographic factors	n (%)	
	Depression (n=109)	Schizophrenia (n=91)
Age		
≤29 years old	60 (55)	49 (53.8)
>29 years old	49 (45)	42 (46.2)
Gender		
Male	27 (24.8)	21 (23.1)
Female	82 (75.2)	70 (76.9)
Primary working site		
Government Hospital	88 (80.7)	76 (83.5)
Community Pharmacy	10 (9.2)	9 (9.9)
Private Hospital	2 (1.8)	2 (2.2)
Enforcement	2 (1.8)	2 (2.2)
Government Health Clinic	7 (6.3)	2 (2.2)
Working experience		
≤4 years	63 (57.8)	46 (50.5)
>4 years	46 (42.2)	45 (49.5)
Experience with mental illness		
Family experience	34 (31.2)	27 (29.7)
Personal experience	19 (17.4)	6 (6.6)
No experience	56 (51.4)	58 (63.7)

Table 2: Number of respondents that identified the vignettes correctly according to demographic factors (n=200)

Demographic factors	Depression (n=109)		Schizophrenia (n=91)	
	n (%) <sup>a</sup>	p-value	n (%) <sup>a</sup>	p-value
Age		0.013 *		0.049 *
≤29 years old	40 (66.7)		29 (59.2)	
>29 years old	21 (42.9)		33 (78.6)	
Gender		0.621		0.22
Male	14 (51.9)		12 (57.1)	
Female	47 (57.3)		50 (71.4)	
Primary working site		0.714		0.155
Government Hospital	50 (56.8)		49 (64.5)	
Community Pharmacy	4 (40.0)		7 (77.8)	
Private Hospital	1 (50.0)		2 (100)	
Enforcement	1 (50.0)		1 (50.0)	
Government Health Clinic	5 (71.4)		2 (100)	
Working experience		0.065		0.052
≤4 years	21 (33.3)		27 (58.7)	
>4 years	40 (87.0)		35 (77.8)	
Experience with mental illness				
Family experience	20 (58.8)	0.687	19 (70.4)	0.767
Personal experience	9 (47.4)	0.408	4 (66.7)	0.079
No experience	32 (57.1)		39 (67.2)	

<sup>a</sup> (%) referred to the percentage of respondents who identified the vignette correctly in each category.

\* Statistically significant difference (p<0.05)

### *Helpfulness of Intervention*

#### People who can help

In the depression vignette, only 72 pharmacists (66.1) agreed that people with depression require professional help but 75 pharmacists (82.4) in the schizophrenia vignette agreed that professional help is required for people suffering from schizophrenia. For the depression vignette, highest number of respondents rated counsellor (94.5%) as helpful followed by psychologist (89.0%) and psychiatrist (83.5%). Less than half of the pharmacists (46.8%) rated themselves as helpful for depressive patient (Table 3). It was found that significantly more pharmacists with age more than 29 years old and respondents who practiced in non-government hospital rated psychiatrist as helpful in depression (p=0.045 and p=0.008) while significantly more pharmacists with working experience less than 4 years rated priest as harmful (p=0.01).

For the schizophrenia vignette, highest number of respondents rated psychiatrist as helpful (97.8%), followed by psychologist (89.0%) and counsellor (82.4%). It is of concern that more pharmacists rated family and friends (75.8%) as helpful compared to pharmacist themselves (56.0%). Pharmacists aging more than 29 years old (p=0.023) and pharmacists with experience more than 4 years significantly (p=0.006) rated person with schizophrenia and dealing it themselves as harmful. It was found that significantly more male respondents rated psychologist (n= 0.019) and pharmacist (n=0.010) as helpful. Meanwhile, significantly more respondents who were currently practiced in non-government hospital rated counsellor (p=0.032), psychologist (p=0.006) and close family or friends (p=0.004) as helpful in schizophrenia vignette. Respondents without family experience significantly rated priest as harmful (p<0.001).

#### Medication

As for medication, 57.8% of respondents managed to identify antidepressant as helpful in depression vignette whereas 76.9% of respondents rated antipsychotic as helpful in schizophrenia vignette. In the depression vignette, larger number of respondents who age more than 29 years old significantly rated antidepressant (p=0.027) and tranquilizers (p=0.026) as helpful. Similarly, respondents who practiced for more than four years also rated antidepressant (p=0.006) and tranquilizers (p=0.014) as helpful for person with depression. On the other hand, significantly more respondents who practiced in non-government

hospital rated antidepressant ( $p=0.017$ ) as helpful. In schizophrenia vignette, none of the medication intervention showed significant differences when compared across various demographic factors.

Table 3: Respondents' perceived helpfulness of various interventions for mental illness (n=200)

	Helpful n (%)	
	Depression (n=109)	Schizophrenia (n=91)
<b>People who can help</b>		
Psychiatrist	93 (85.3) *	89 (97.8)
Psychologist	97 (89)	81 (89) *
Family doctor	81 (74.3)	60 (65.9)
Pharmacist	51 (46.8)	51 (56) *
Counsellor	103 (94.5)	75 (82.4) *
Social Worker	63 (57.8)	45 (49.5)
Telephone Counselling	73 (67)	45 (49.5)
Close family or friends	89 (81.7)	69 (75.8) *
Priest	5 (4.6) *	2 (2.2) *
Let him deal himself	1 (0.9)	0 (0) *
<b>Medications</b>		
Antidepressant	63 (57.8) *	53 (58.2)
Antipsychotic	27 (24.8)	70 (76.9)
Tranquilizers	24 (22) *	40 (44)
Sleeping pill	47 (43.1)	29 (31.9)
Vitamin and minerals	20 (18.3)	7 (7.7)
Pain relieving	5 (4.6)	3 (3.3)
Antibiotic	2 (1.8)	0
<b>Activities</b>		
Psychotherapy	87 (79.8)	85 (93.4)
Cognitive behavior therapy	74 (67.8)	78 (85.7) *
Electroconvulsive therapy	20 (18.3)	34 (37.4) *
Admit to psychiatric ward	20 (18.3)	44 (48.4)
Attending courses on relaxation, stress management	105 (96.3) *	76 (83.5) *
Become more physically active	24 (86.2)	68 (74.7)
Reading self-help book	77 (70.6)	43 (47.3) *
On special diet	22 (21.1) *	16 (17.6)
Hypnosis	17 (15.6) *	24 (26.4) *
Having occasional alcoholic drink	7 (6.4) *	7 (7.7)

\* Statistically significant differences observed for selected demographic factors ( $p<0.05$ )

### Activities

In the depression vignette, respondents rated attending courses on relaxation and stress management (96.3%) was helpful, followed by physically active (86.2%) and psychotherapy (79.8%). For schizophrenia vignette, a larger number of respondents believed that psychotherapy (93.4%), cognitive behaviour therapy (CBT) (85.7%) and attending courses on relaxation and stress management (83.5%) were helpful. On the other hand, it was found that low number of respondents rated ECT and admission to ward as helpful in both vignettes.

In the depression vignette, significantly higher number of pharmacist aging above 29 years old and government hospital pharmacists rated occasionally alcoholic drink as harmful in person with depression ( $p=0.024$  and  $p=0.034$ ). However, hypnosis was rated significantly by government hospital pharmacists as neither helpful nor harmful ( $p= 0.044$ ). Significantly more respondents without family or friends suffering from mental illness rated special diet as neither helpful nor harmful ( $p=0.044$ ). On the other hand, significantly more respondents who themselves did not have any mental illness rated attending courses on relaxation, stress management, meditation or yoga to be helpful when compared to the respondents who declared to have mental illness ( $p=0.002$ ).

In the schizophrenia vignette, it was found that significantly more young pharmacists (29 years old and below) rated attending courses on relaxation, stress management, meditation or yoga ( $p=0.048$ ), reading self-help book ( $p=0.034$ ), ECT (0.018) and CBT ( $p=0.034$ ) as helpful. When comparing across the practice sites, significantly more government pharmacists rated hypnosis as neither helpful nor harmful in schizophrenia ( $p=0.032$ ) but rated attending relaxation courses ( $p=0.046$ ) as helpful. Pharmacists with no family members or friends suffering from mental illness significantly rated attending relaxation courses ( $p=0.027$ ) and reading self-help book to be helpful ( $p=0.043$ ).

When looking at the information seeking behaviour, most of the respondents rated health educator to be helpful in providing information to person with mentally ill in both the depression vignette (91.7%) and schizophrenia vignette (87.9%). On the other hand, sourcing information from website was rated to be helpful by least pharmacists and in fact it was rated as harmful by almost one third of the pharmacists in both the depression vignette (27.5%) and schizophrenia vignette (29.7%).

### *Long-term Outcomes of Mental Illness*

#### Long-term recovery

A total of 61.5% of respondents in the depression vignette and 70.3% of respondents in the schizophrenia vignette believed that person with depression can fully recover but it would probably reoccur even if professional help was sought (Table 4). If a person with mental illness did not seek professional help, majority of respondents in both vignette (68.8% in depression vignette and 79.1% in schizophrenia vignette) believed that the condition could get worse.

For the depression vignette, none of the demographic factor showed significant differences in the belief of pharmacists on long term recovery. For the schizophrenia vignette, on the other hand, it was found that significantly more pharmacists aged more than 29 years old ( $p=0.017$ ) and pharmacists who have practiced for more than 4 years ( $p=0.007$ ) believed that person with schizophrenia would get worse if professional help was not sought.

#### Long term functioning

For the likelihood of long-term functioning when compared to other people in the community, the highest number of respondents believed that person with depression will be more likely to have poor friendships (45.9%) but less likely to be aggressive (47.7%) (Table 5). Similarly, the highest number of respondents believed that person with schizophrenia will be more likely to have poor friendships (45.1%) but a total of 47.3% of pharmacists believed these groups of patients will be less likely to be able to understand another people's feeling.

When looking at the effect of close contact experience, it was found that significantly more pharmacists who have family or friends with mental illness believed that people with depression will be less likely to be violent ( $p=0.049$ ) or take illegal drugs ( $p=0.007$ ) in long term when compared to other people in the community. However, significantly more pharmacists who have no family or friends with mental illness believed that people with depression will be less likely to understand other people's feeling ( $p=0.043$ ). For schizophrenia, none of the demographic factors showed significant differences in terms of pharmacist belief on long term functioning.

#### Attitude towards mentally ill person

A total of 56.9% of respondents from depression vignette and 78.0% of respondents from schizophrenia believed that community would discriminate person with mental illness. When looking at the pharmacist's attitude towards mentally ill person, majority of the pharmacists agreed that person with depression (45.0%) and schizophrenia (65.9%) is unpredictable. However, 51.9% of the pharmacists disagreed that depression is a sign of weakness. It was also found that majority of pharmacists strongly disagreed with the idea of avoiding people with depression (45.9%) and schizophrenia (51.6%) to prevent themselves from the disease.

In terms of belief about discrimination in the community, majority of the pharmacists agreed that most people in the community will perceive depression (54.1%) and schizophrenia (59.3%) as a sign of weakness. A total of 56.0% of pharmacists also agreed that public would perceive schizophrenia patient as someone dangerous. Besides, majority of pharmacists agreed that most of the people in the community would not tell anyone if they have depression (57.8%) or schizophrenia (58.2%).

Looking at the aspect of contact with person who is mentally ill, it was found that most of the pharmacists were probably willing to have contact i.e. staying next door, socialize, making friends and working together with someone who has depression or schizophrenia. However, pharmacists were probably unwilling to have family member who suffer from schizophrenia (40.7%) compared to depression (35.8%).

**Perceived risk factor of mental illness**

Generally, majority of pharmacist believed that depression and schizophrenia were unlikely to be due to virus and allergy. Most of the pharmacists believed that depression was caused by stress (83.5%), recent death of close contact (74.3%) and problems from childhood (73.4%). On the other hand, problems from childhood (74.7%) and stress (73.6%) were perceived to be the risk factors for schizophrenia by most of the pharmacists. Of note, there was also quite a handful of pharmacists that believed that chemical imbalance in the brain was the cause of depression (53.2%) and schizophrenia (60.4%).

Table 4: Respondents’ perceived probability of long-term recovery for mental illness

	n (%)	
	Depression (n=109)	Schizophrenia (n=91)
<b>With professional help</b>		
Full recovery with no further problems	18 (16.5)	13 (14.3)
Full recovery but problem would probably reoccur	67 (61.5)	64 (70.3)
Partial recover	9 (8.3)	1 (1.1)
Partial recover but problems would probably reoccur	15 (13.8)	13 (14.3)
No improvement	0	0
Get worse	0	0
<b>No professional help</b>		
Full recovery with no further problems	1 (0.9)	0
Full recovery but problem would probably reoccur	2(1.8)	1 (1.1)
Partial recover	2 (1.8)	1 (1.1)
Partial recover but problems would probably reoccur	18 (16.5)	9 (9.9)
No improvement	11 (10.1)	8 (8.8)
Get worse	75 (68.8)	72 (79.1) *

\* Statistically significant differences observed for selected demographic factors (p<0.05)

Table 5: Respondents’ perceived likelihood of long-term functioning of mentally ill person

	More likely		Just likely		Less likely	
	Depression	Schizophrenia	Depression	Schizophrenia	Depression	Schizophrenia
To be violent	29 (26.6)	33 (36.3)	28 (25.7)	21 (23.1)	52 (47.7) *	37 (40.7)
To drink too much	37 (33.9)	27 (29.7)	31 (28.4)	25 (27.5)	41 (37.6)	39 (42.9)
To take illegal drugs	33 (30.3)	30 (33)	30 (27.5)	22 (24.2)	46 (42.2) *	39 (42.9)
To have poor friendship	50 (45.9)	41 (45.1)	21 (19.3)	19 (20.9)	38 (34.9)	31 (34.1)
To attempt suicide	43 (39.4)	40 (44)	24 (22)	14 (15.4)	42 (38.5)	37 (40.7)
To be understanding of other people’s feelings	32 (29.4)	27 (29.7)	32 (29.4)	21 (23.1)	45 (41.3) *	43 (47.3)
To have good marriage	27 (24.8)	24 (26.4)	34 (31.2)	32 (35.2)	48 (44)	35 (38.5)
To be caring parent	34 (31.2)	25 (27.5)	29 (26.6)	31 (34.1)	46 (42.2)	35 (38.5)
To be a productive worker	34 (31.2)	26 (28.6)	26 (23.9)	27 (29.7)	48 (44)	38 (41.8)
To be creative or artistic	24 (22)	24 (26.4)	38 (34.9)	38 (41.8)	47 (43.1)	29 (31.9)

\* Statistically significant differences observed for selected demographic factors (p<0.05)



## Discussion

In this study, it was found that near to half of the pharmacists were unable to identify depression while one third of them were unable to identify schizophrenia based on the scenario described in the questionnaire. The rate of recognition on these two mental illnesses was relatively lower compared to the result in a previous study (7). As pharmacy is easily accessible to the public, pharmacists potentially play an important role in screening and referring person with early relapse warning signs to the appropriate healthcare professional. Hence, the finding in this study was worrisome as it indicated that many pharmacists were unable to recognize these two common types of mental health illnesses. This may result in the incapability to provide necessary help or appropriate advice when they encounter such group of patients.

Looking at the self-help behaviour or help seeking behaviour, most of the results in this study was consistent with a previous study in Australia by O'Reilly *et al.* (7). In both studies, the pharmacists rated professional help as helpful in both vignettes except approximately half of the pharmacists in this current study did not rate themselves as helpful in both vignettes. This result was particular of concern as this probably indicated that pharmacists were generally not comfortable to provide pharmaceutical care to patients with mental health illness. This was evident from the result of another study (8) where the authors reported that pharmacists had a lower degree of willingness to provide pharmaceutical care to mentally ill patients than patients with cardiovascular disease due to the lack of knowledge in mental illness. The lack of knowledge in mental health illness was also probably the main reason that contributed to the lower recognition rate of mental illness in this study. In addition, lack of privacy setting in the pharmacy environment and pharmacists' perception on the challenging behaviour of mentally ill patients were the other reasons that were reported to be contributing to this situation (9,12-14).

In this study, it was found that significantly higher number of older pharmacists and more experienced pharmacists were able to identify the proper management of depression compared to the younger and less experienced one. The failure of the younger and less experience pharmacists to identify and provide proper management could further delay the appropriate healthcare services for this group of patients. Rubio-Valera *et al.* (2014) described that pharmacists could play an important role to screen the signs and symptoms of depression as they are more accessible by the community (15). Their ability to identify proper treatment in depressive patient, who was previously undetected, can assist the patient to receive appropriate health service as earlier as possible. Therefore, more specialized training or education should be provided for the younger and less experienced pharmacists in order to improve their mental health literacy and boost their confidence in managing psychiatry patients in the community.

Most of the pharmacists in this study did not rate admission to the psychiatric ward as helpful and generally most of them had negative view towards ECT in both vignettes. The results were consistent with the previous study on pharmacists (7) and public (16). This negative view on the standard treatment in psychiatry was particular of concern as this might affect the quality of counselling and advice given to these groups of patients. The possible reason could be due to insufficient exposure during undergraduate and insufficient training on mental health management as reported by a recent study done in Malaysia (17).

In terms of long-term recovery, it was found that pharmacists in Johor generally had reasonable and positive expectation on long term recovery. Pharmacist in this study generally also held negative view on long term recovery without professional help. Similar finding was also reported previously among the other healthcare professional and public (7,16). This finding perhaps showed that pharmacists generally agreed on the need of professional help and this positive view on professional help seeking behaviour would be particularly important when these patients seek help from the pharmacists in the community.

On the other hand, pharmacists in Johor generally were optimistic towards several negative presentations such as being violent, alcoholic and taking substance in both the depression and schizophrenia vignettes. This result was consistent with a previously reported finding where Australian pharmacists also reported that these negative items were less likely to occur in the long term (7). In the reality, however, patients diagnosed with mental illness could still be expected to experience these negative outcomes even after a long time. Hence, over optimistic towards the long-term functioning of mental health patients may probably indicate less familiarity with mental illnesses. This was evident from a previously reported study in Malaysia where most of the pharmacists agreed that they are lack of knowledge and training in mental health illness (17).

Nonetheless, majority of pharmacists rated negatively on the long-term social functioning of both vignettes, such as 'poor friendship', 'ability to care for others', 'good marriage', 'caring parents' and 'productive worker'. With proper treatment, patient with depression and schizophrenia may not necessarily have poor social functioning in the long term. Therefore, this result highlighted that majority of pharmacists in this study has certain degree of stigmatization towards mentally ill person in terms of their social functioning. This could adversely affect patient's help-seeking behaviour and compromise the chances of recovery as well as their functioning in the society in long term (18).

In this study, majority of the pharmacists felt that mentally ill patients, especially patients with schizophrenia, may be discriminated by the community. This was supported by a Malaysian study which reported schizophrenia to be the most common mental illness that was discriminated by public, followed by bipolar disorder and depression (18). Some neighbouring Asian countries also reported similar results (19-20). This was, however, in contrast with another Australian study where their pharmacists were generally having more positive belief and attitude towards mental illness (7). Cultural differences could probably be the reason behind this. As reported by Ng *et al.* (21), Asian community tends to express stigma on mentally ill patients and their family due to their perception that mental illness is associated with violence, hereditary deficits and spiritual punishment. On top of that, dispensing separation in Australia could have probably increase the frequency of prescription medication filled by mentally ill patient in the community pharmacies. Therefore, this may increase the pharmacists' contact with mentally ill patient and give rise to the more positive view on the long-term outcome of mentally ill patients (22).

Majority of pharmacists in this study believed that person who suffers from mental illness does not tell anyone else about their condition. Besides, majority of our respondents also believed that mental illness is labelled as a sign of weakness and patients with schizophrenia is particularly dangerous. This was coherent with a previous study which reported that labelling, avoiding and employment discrimination were the most common types of discriminations towards mentally ill person in Malaysia (18). Due to the stigmatization, the sick ones may be worried to seek professional help or may default their treatment in order to conceal the condition (18,21).

There were some limitations that should be considered when interpreting the results of this study. Firstly, insufficient response from some sites of practice, such as community pharmacy, private hospital, industrial pharmacy and pharmacy enforcement, and inadequate response from male pharmacists had resulted in unequal distribution in these demographic factors. Hence, the differences in mental health literacy in these demographic factors need to be considered carefully. Secondly, there might be bias in the reporting of personal experience with mental illness as some individuals might not wish to disclose their own or family conditions. Besides that, the respondents were mainly below 32 years old. Comparing to the general retirement age in Malaysia which ranges from 55 to 60 years old, our respondents were relatively younger. Therefore, the result of this study might not generalize to the pharmacist population in Malaysia.

## Conclusion

In general, a large number of pharmacists in Johor were still relatively less likely to be able to recognize common mental illness. Most of the pharmacists also did not perceive themselves as important in the management of mental health illness. However, older and more experienced pharmacists were found to have higher degree of mental health literacy in most domains of the study as this was indicated from ability to identify professional intervention, proper medicine, harmful lifestyle and long-term recovery. As the prevalence of mental illness increases over the years, pharmacists especially the young and less experience ones may require more intensive training and education on the handling and communication with mentally ill patients. Pharmacists should be aware that their attitudes and discrimination towards mental health illness may affect their services. As this is a preliminary study about mental health literacy focusing on pharmacists in Johor, a national level study could probably be done in future to better understand mental health literacy of pharmacists in Malaysia.

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