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BACKGROUND

- Each year approximately 1 in 5 Americans suffer with some form of mental illness, and 1 in 2 will experience a mental illness in their lifetime<sup>1,2</sup>
- An estimated 13 billion patient visits are made to 61,863 community pharmacies each year in the United States<sup>3,4</sup>
- Studies have indicated that access to community pharmacist services has a high value for many individuals with mental illnesses, yet these individuals often face barriers in accessing such services<sup>5</sup>
- By identifying barriers among community pharmacists to providing care, it is anticipated that an action plan may be developed such that clinical, economic, and humanistic outcomes can be optimized

OBJECTIVE

- To assess the attitudes, knowledge, stigma, barriers and practice-related characteristics of a national sample of community pharmacists towards persons with mental illness

METHODS

- A cross-sectional survey questionnaire was mailed to a national random sample of 3,000 community pharmacists
- Modified Dillman approach was utilized which included a first mailing (cover letter, consent form, survey questionnaire and self-addressed business reply envelope), followed by a postcard reminder approximately 2 weeks later. A second mailing of study materials was conducted at approximately 4 weeks after the first mailing
- The 101-item questionnaire contained four main sections:
  - Demographics
  - Knowledge and practice characteristics
  - Provision of clinical pharmacy services, and
  - Comparative (self and other pharmacist's) opinions
- Scaled measures of service provision within four areas (comfort, confidence, willingness and interest) and comparative opinions in three areas (stigma, attitudes and beliefs, among self and others)<sup>6-9</sup> were stratified according to respondent demographics
- Descriptive statistics were performed and reliability analyses using complete case analysis were performed on all 10 main scales: comfort, confidence, willingness, interest, attitudes (self), attitudes (others), stigma (self), stigma (others), beliefs (self) and beliefs (others)

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Community pharmacists and patients with mental illness: a national survey of practice, knowledge, attitudes, stigma and barriers

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RESULTS

Table 1: Provision of clinical pharmacy services for mental illness (individual items)

Item	Comfort (mean [SD])	Confidence (mean [SD])	Willingness (mean [SD])	Interest (mean [SD])
Talking to a patient about medication for a mental illness	2.98 (0.692)	2.82 (0.702)	3.39 (0.604)	3.15 (0.687)
Asking the patient about their goals for therapeutic outcomes	2.66 (0.855)	2.58 (0.841)	3.05 (0.775)	2.93 (0.814)
Asking the patient about side effects of his/her mental illness medication	3.19 (0.671)	3.04 (0.669)	3.38 (0.594)	3.18 (0.711)
Asking the patient what he/she knows about the mental illness medication	3.05 (0.746)	2.91 (0.698)	3.22 (0.688)	3.08 (0.781)
Asking the patient about therapeutic response to their medication	3.07 (0.698)	2.88 (0.694)	3.21 (0.672)	3.09 (0.738)
Talking to a physician about any concerns regarding a patient's mental illness medication	2.98 (0.807)	2.75 (0.852)	3.21 (0.749)	3.01 (0.777)
<b>Scaled score § Cronbach's alpha</b>	<b>17.93 (3.48) 0.870</b>	<b>16.98 (3.49) 0.874</b>	<b>19.47 (3.37) 0.908</b>	<b>18.44 (3.91) 0.934</b>

1 = Not comfortable/confident/willing/interested, 2 = somewhat comfortable/confident/willing/interested, 3 = Comfortable/confident/willing/interested, 4 = Very comfortable/confident/willing/interested

§ One-way ANOVA p<0.001 across four groups

Table 2: Comparative opinions about mental illness (individual items)

Item	Self (Mean, [SD])	Other pharmacists (Mean [SD])*
<b>Stigma †</b>		
I would be willing to consider a person with mental illness as a close friend	1.65 (0.756)	2.17 (0.753)
I would be willing to work alongside a person with mental illness	1.76 (0.764)	2.28 (0.778)
I would be willing to hire a person with mental illness	2.09 (0.762)	2.50 (0.778)
I would be willing to live with a person with mental illness	2.11 (0.852)	2.48 (0.780)
I would be willing to have a person with mental illness as a neighbor	1.74 (0.766)	2.18 (0.752)
I would be willing to have a person with mental illness as a baby sitter for children	3.01 (0.796)	3.13 (0.734)
I would be willing to have one of my children marry a person with mental illness	2.57 (0.888)	2.77 (0.783)
I would be willing to introduce a friend as a relationship partner to a person with mental illness	2.41 (0.855)	2.60 (0.787)
I would recommend a person with mental illness for a job	2.11 (0.785)	2.48 (0.755)
<b>Scaled score** Cronbach's alpha</b>	<b>19.77 (5.95) 0.895</b>	<b>22.60 (5.55) 0.928</b>
<b>Beliefs ‡</b>		
Patients with mental illness are unpredictable	3.07 (0.860)	3.34 (0.775)
Patients with mental illness will never recover	2.09 (0.931)	2.49 (0.926)
Patients with mental illness are hard to talk to	2.41 (0.832)	2.74 (0.920)
Patients with mental illness are a danger to others	2.47 (0.778)	2.73 (0.859)
Patients with mental illness have themselves to blame	1.48 (0.816)	1.89 (0.994)
<b>Scaled score** Cronbach's alpha</b>	<b>11.39 (2.66) 0.647</b>	<b>47.09 (6.30) 0.786</b>
<b>Attitudes §¶</b>		
Mental illness is a real disease §	4.66 (0.792)	4.35 (0.902)
Anyone can suffer from mental illness §	4.74 (0.577)	4.33 (0.837)
Most mental illness problems stem from negative life events ¶	3.01 (0.951)	2.78 (0.859)
Mental illness is common in older patients §	3.06 (0.970)	3.24 (0.864)
Patients with mental illness need to pull themselves together to get over it ¶	4.23 (0.948)	3.73 (1.00)
Most patients with mental illness get better without treatment ¶	4.24 (0.807)	3.89 (0.890)
Patients with mental illness put unnecessary strain on pharmacists ¶	4.10 (0.855)	3.63 (1.04)
I believe that a person with mental illness is just as intelligent as a person without mental illness §	3.97 (0.888)	3.45 (0.869)
I believe that a person with mental illness is as trustworthy as a person without mental illness §	3.26 (1.043)	2.98 (0.913)
I believe that mental illness is a sign of personal weakness ¶	4.36 (0.858)	3.98 (0.933)
I believe that a person with mental illness can be as productive as a person without mental illness §	3.75 (0.990)	3.38 (0.933)
I would consider the opinions of a person with mental illness as seriously as I would consider the opinions of individuals without mental illness §	3.86 (0.880)	3.42 (0.924)
I believe that community pharmacists should make an effort to be active supporters of the recovery efforts being made by individuals with mental illness §	4.31 (0.648)	3.89 (0.771)
<b>Scaled score** Cronbach's alpha</b>	<b>51.82 (5.26) 0.703</b>	<b>47.09 (6.30) 0.786</b>

† Items (stigma): 1= definitely willing, 2= probably willing, 3= probably not willing, 4= definitely not willing  
‡ Items (beliefs): 1= strongly disagree, 2= disagree, 3= neutral, 4=agree, 5=strongly agree  
§ Regular items (attitudes): 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree  
¶ Reverse items (attitudes): 1 = strongly agree, 2 = agree, 3 = neutral, 4 =disagree, 5 = strongly disagree  
\* All items p<0.05 for comparison between score for self vs. other pharmacists  
\*\* All scaled scores p<0.05 for comparison between score for self vs. other pharmacists

RESULTS

- A total of 239 responses (7.97%) were received
- The mean age was 45 ± 13 years, 46.4% of respondents had a PharmD degree, 39.0% reported having an adequate knowledge of medication therapy for mental illnesses, and 28.1% reported offering MTM services regularly
- Across provision of pharmacy services, ratings for willingness/interest were higher than those for comfort/confidence
- Pharmacists who provided general MTM services had significantly higher scores for willingness (19.94 vs 18.52, p<0.05) and interest (19.10 vs 17.22, p<0.05) than those who did not
- Pharmacists who reported that their MTM services included mental health patients reported higher confidence (17.73 vs 16.01, p<0.05) and willingness (20.0 vs 18.62, p<0.05) in providing services compared to those who did not
- Personal experience with mental illness also resulted in higher scores across all four domains of service provision, as well as lower levels of stigma (18.28 vs 20.76, p<0.05) and more positive beliefs/attitudes (52.24 vs 50.53, p<0.01) compared to respondents without personal experience with mental illness

DISCUSSION/CONCLUSION

- There is an unmet need for pharmacists in providing services for patients with mental illness, yet the barrier of stigma is present in a substantial proportion of the sample
- There seems to be an overall willingness and interest among community pharmacists to engage in services for patients with mental illness and yet, community pharmacists report decreased levels of comfort and confidence in providing care for such patients.
- An organized effort to reduce or eliminate mental illness stigma from the practice of pharmacy is needed and should focus on pharmacy students and practicing pharmacists.

REFERENCES

1. Center for Behavioral Health Statistics and Quality. 2015. <http://www.samhsa.gov/data/>  
2. Centers for Disease Control and Prevention. 2011. [http://www.cdc.gov/mentalhealth/surveillance/fact\\_sheet.html](http://www.cdc.gov/mentalhealth/surveillance/fact_sheet.html)  
3. US Department of Health & Human Services. 2008. <http://bhpr.hrsa.gov/healthworkforce/reports/pharmsupply20042030.pdf>.  
4. IMS Health. 2016. <http://www.skainfo.com/reports/most-powerful-pharmacies>  
5. CPNP Foundation. 2012. [https://cpnpt.org/\\_docs/foundation/2012/hami-survey-report.pdf](https://cpnpt.org/_docs/foundation/2012/hami-survey-report.pdf)  
6. Rickles NM, Dube GL, McCarter A, Olshan JS. J Am Pharm Assoc. 2010 Nov-Dec;50(6):704-13.  
7. Scheerder G, De Coster I, Van Audenhove C. Res Social Adm Pharm. 2009;5(3):242-52.  
8. Kassam A, Papish A, Modgill G, Patten S. BMC Psychiatry. 2012;12:62.  
9. Liekens S, Smits T, Laekeman G, Foulon V. Eur Psychiatry. 2012;27(7):528-35.



The CPNP Foundation envisions a world where individuals living with mental illness, their caregivers, and their health care team, work jointly with pharmacy professionals to ensure effective and compassionate treatment.