

The Effect of an Innovative Psychiatry Clerkship on Pharmacy Students Perceptions towards Mental Health and Stigma: A Pilot Intervention Study from Jordan

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ABSTRACT

It is believed that psychiatry clerkship can improve communication of pharmacists with psychiatric patients. This pilot study aimed to assess and describe the effect of psychiatry clerkship on student's attitudes and perceptions towards psychiatry, psychiatric patients and the surrounding stigma. A prospective survey was conducted at The University of Jordan to assess: 1. PharmD students' feedback regarding: (a) the 2-week psychiatry clerkship; (b) psychopharmacology games and 2. Students' perceptions, attitudes and stigma regarding mental health. The questionnaire was adopted from three commonly used tools: Balon Attitudes towards Psychiatry, Mental Illness Clinicians Attitudes Scale (MICA) and Attitudes toward Psychiatry-30 (ATP-30). All students in the rotation filled the questionnaire (n=29). Students were highly satisfied with the clerkship and psychopharmacology games. Students had shown positive attitude towards psychiatry at the baseline, which further improved at the end of the course. Mental health stigma showed a mixture of positive and negative attitudes, which did not significantly change after the clerkship. Psychiatry clerkship in the PharmD curriculum can help in improving the general perception and attitudes of future pharmacists towards mental health.

Keywords: Clerkship, Jordan, Mental Health, PharmD, Psychiatry, Stigma.

1. INTRODUCTION

According to the WHO, it is estimated that 450 million people worldwide currently suffer from mental or neurological disorders, placing these disorders among the leading causes of ill health and disability in the world.¹ However, literature shows that there is shortage of mental health specialists (physicians, nurses and pharmacists),² which has been an issue of concern in developed³ and, particularly, in developing countries.⁴ Furthermore, people suffering from mental illnesses are among the most stigmatized and suffer from discrimination in many areas of daily life as a consequence of their illness.⁵ The

stigmatization of psychiatric patients by healthcare professionals in general and pharmacists in particular has negative effects similar to that propagated by other health care professionals⁶ Stigma by pharmacists may result in miscommunications and failure to achieve positive clinical outcomes.⁷

Most of the available literature concerning attitude of students towards the field of psychiatry is related to medical schools.⁸⁻¹⁰ A recent comprehensive international survey of medical students found that overall, only 4.5 percent would be 'definitely considering' psychiatry as a career.¹¹ In Jordan, the attitude of medical students towards psychiatry is reported to be generally positive. This favored attitude was further improved after a four-week psychiatry clerkship.¹⁰

Worldwide studies about PharmD students' attitudes

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towards mentally ill patients are controversial to whether there are majorly positive or negative attitudes.¹²⁻¹⁴ It has been shown that pharmacists' attitude and stigma towards psychiatry can be improved following psychiatry clerkships.^{15,16} Such clerkships can improve the communications of PharmD students with mentally ill patients. They can also help decrease stigma and/or improve attitudes to provide the adequate pharmaceutical care to patients.¹⁷ Psychiatric clerkship also provides a good tool for academics and clinical teaching professionals to promote psychiatry to students, including their potential career orientation.¹⁸

Since 2005, The University of Jordan has started a Doctor of Pharmacy (PharmD) program where students have to complete 216 credit hours for graduation. The sixth year of the PharmD program is a clerkship year. In this year students spend 14 weeks rotations in internal medicine, along with five two-to-four weeks' rotations in other medical specialties including geriatrics/psychiatry, pediatrics, obstetrics/gynecology, ambulatory care and surgery. The School of Pharmacy at The University of Jordan revised the content of its 2-week geriatrics/psychiatric clerkship in 2015 to offer more structured and more lengthened training in psychiatry. One of the major aims of the rotation is to provide both clinical skills and knowledge in psychiatry through problem-based learning and students' exposure to different subjects in mental illness. Curriculum elements include both on-site activities and theoretical parts. For the on-site training activities, the students are distributed between the inpatient-training site (The Psychiatric Unit) and the outpatient psychiatric clinics. The in-patient experience includes exposure to a variety of psychiatric conditions, attending diagnosis and risk assessment sessions with physicians, interviewing patients with emphasis on effective patient communication and discussing fundamentals of psychopharmacology and psychotropic medication management with clinical preceptors and psychiatrists. Students are allowed to review patients' medical profiles and their medications, under supervision of clinical preceptors, in order to assess patient's medications for efficacy and safety and to

provide recommendations in case of treatment-related problems with the expectation that students will develop competency in these areas.

In addition to on-site activities, clerkship didactics include a variety of mental health lectures and educational sessions. Students are asked to work on different psychopharmacology assignments and presentations about mental illnesses and to participate in daily class discussions of real patient cases.

In belief that the use of innovative teaching strategies can stimulate and enhance learning process, we have incorporated several psychopharmacology games into the clerkship.¹⁹ several studies show that incorporating games in learning process will encourage student interest and motivation to learning¹⁹⁻²¹ many health professions, such as nursing and medicine, have utilized games to teach pertinent information to their students. However, only one study reported the use of pharmacology/pharmacotherapy games in psychiatric education of pharmacy students.²²

Furthermore, to the best of authors' knowledge, there are no reports in Jordan about pharmacy students' attitude towards psychiatry. Therefore, this study aimed to fill in the gap by the assessment of the impact of the two-week psychiatry clerkship at the Jordan University Hospital (JUH) on PharmD students' attitudes towards mental health, their interest and knowledge of psychiatry, and perceptions of stigma towards mental illness. Moreover, there have been very limited studies regarding the development of clerkship programs in the undergraduate PharmD curricula, including psychiatry clerkship. Our study introduces the first sophisticated training program for psychiatry clerkship in Jordan, which can be used as a model for other national curricula.

Methods

Study subjects

The study was conducted in the period between February 4th, 2016 and March 17th, 2016. All PharmD students who attended the psychiatry clerkship at JUH at that period (n= 29) were included in this study

Ethical Considerations:

The study was considered by the IRB at JUH as exempt from ethical approval. However, the approval for conduction of the study was obtained from the Scientific Research Committee at the School of Pharmacy, The University of Jordan (UJ). Informed consent was obtained from all study participants. Students were informed about the purpose of the study, and the voluntariness and confidentiality of their participation. They were also told that their responses will be anonymous and will not affect their grades in any way.

Study Design

In order to assess the impact of the psychiatry clerkship on students' knowledge and attitudes, we applied the pre-post prospective survey technique. Sixth year Pharm D students' feedback about: (a) the clerkship in general; (b) psychopharmacology games as well as students' attitudes regarding psychiatry were obtained both at the baseline (the first day) and at the end of the clerkship period.

Research Instrument

Students were asked to evaluate the clerkship using a 13-item questionnaire built up of 3 parts (course helpfulness, course material, and hands-on activities) which had been previously designed and validated.²² the questionnaire used the 5-level Likert scale to assess students' response to each question ranging from "strongly agree" to "strongly disagree".

Psychopharmacology games

The clerkship instructors developed several learning games; *guess the drug name, short answer game, case-solving (paper-based) game and, man-standing (individual) game*. Our games included both team- and individual-based formats. During the last day of the clerkship, the games were introduced to students as a review session. Likert scale was administered to assess students' perceptions and attitudes towards the games. Students also were asked to vote for the best game.

Students' attitude toward psychiatry

For students' attitude towards psychiatry, we used a pharmacy-specific questionnaire adapted from three commonly used and previously validated tools among

different health care professions, Balon Attitudes Towards Psychiatry,²³ Mental Illness Clinicians Attitudes Scale (MICA)²⁴ and Attitudes Toward Psychiatry-30 (ATP-30).²⁵

From 29-item Balon Attitudes Towards Psychiatry Questionnaire, we selected 9 items most related to pharmacy education; with scoring based on a four-point Likert scale ranging from 1 "strongly disagree" to 4 "strongly agree". Negatively phrased items had reversed scoring. The Balon Attitudes towards Psychiatry score is the sum of the total scores for all items with a higher score indicating a more positive attitude (maximum score in the modified form is 36, lowest = 9).

From 30 items in ATP-30 questionnaire, we adapted 17 most related to pharmacy education, the scoring based on a five-point Likert scale from 1 "strongly disagree" to 5 "strongly agree". Score number is opposed for positively phrased items. The ATP score is the sum of the total scores for all items with a higher score indicating a more positive attitude (maximum score in the modified form is 85, lowest = 17, and neutral = 51).

From 16 items in MICA questionnaire, we adapted 8 items mostly related to pharmacy education. Each question is based on a 6-point Likert scale – strongly agree, agree, somewhat agree, somewhat disagree, disagree, strongly disagree. The minimum total score in the modified form is 7 and the maximum is 42. A lower score indicates a less stigmatizing attitude towards psychiatry and mental illness. Negatively phrased items had reversed scoring.

In addition, we used a 10-point visual analog scale to assess students' interest and knowledge in psychiatry as well as choosing psychiatry as a career (1= low interest/knowledge; 10=high interest/knowledge and 1=definitely not considering psychiatry as a career; 10=definitely considering).

The questions were reviewed by 2 clinical pharmacy preceptors with experience in psychiatry training and modified accordingly.

Statistical analysis

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS, V.21). Statistical

methods included general description of quantitative data. The data obtained before and after the clerkship were compared using McNemar testing. The level of significance was set at 0.05.

Results

Out of 29 students invited to participate in the attitude towards psychiatry, course evaluation, and games evaluation surveys, 28 responded to the course evaluation

survey (90% response rate), 29 responded to the games evaluation survey (100% response rate) and 20 responded to the attitude towards psychiatry survey (69% response rate).

Students' satisfaction with the clerkship

Students were highly satisfied with all course evaluation parts (Table 1). Students were more satisfied with the helpfulness of the course than with the course material and daily activities.

Table (1)
Participating PharmD Students' satisfaction about the psychiatry clerkship (n=29)

Part. A: Course helpfulness					
Points of evaluation	Strongly agree, %	Agree, %	Uncertain, %	Disagree, %	Strongly disagree, %
Was clerkship course helpful for you?	13 (50)	12 (46.1)	1 (3.8)	0 (0)	0 (0)
Do you think that this clerkship improved your communication skills with other health care professionals?	9 (34.6)	13 (50)	3 (11.5)	1 (3.8)	0 (0)
Do you think you had a good experience with the deal of psychiatric cases?	14 (53.8)	11 (42.3)	1 (3.8)	0 (0)	0 (0)
Do you think that you had a good impact on patient care in this clerkship?	11 (42.3)	9 (34.6)	4 (15.4)	1 (3.8)	0 (0)
Part. B: Course material					
Points of evaluation	Strongly agree, %	Agree, %	Uncertain, %	Disagree, %	Strongly disagree, %
Are you satisfied with the clarity of clerkship course outline?	5 (19.2)	13 (50)	6 (23.1)	2 (7.7)	0 (0)
Was the content of the material appropriate?	7 (26.9)	13 (50)	3 (11.5)	3 (11.5)	0 (0)
Was the quantity of material course appropriate?	9 (34.6)	12 (46.1)	3 (11.5)	1 (3.8)	3.8
Was the quality of material course appropriate?	8 (30.8)	13 (50)	3 (11.5)	2 (7.7)	0 (0)
Was the quantity of homework appropriate?	10 (38.5)	15 (57.7)	1 (3.8)	0 (0)	0 (0)
Were the types of homework appropriate?	12 (46.1)	13 (50)	1 (3.8)	0 (0)	0 (0)
Part. C: Hands-on activities					
Are you satisfied about the general daily activities during this clerkship?	9 (34.6)	10 (38.5)	5 (19.2)	1 (3.8)	1 (3.8)

Part. A: Course helpfulness					
Points of evaluation	Strongly agree, %	Agree, %	Uncertain, %	Disagree, %	Strongly disagree, %
Was clerkship course helpful for you?	13 (50)	12 (46.1)	1 (3.8)	0 (0)	0 (0)
Do you think that this clerkship improved your communication skills with other health care professionals?	9 (34.6)	13 (50)	3 (11.5)	1 (3.8)	0 (0)
Do you think you had a good experience with the deal of psychiatric cases?	14 (53.8)	11 (42.3)	1 (3.8)	0 (0)	0 (0)
Do you think that you had a good impact on patient care in this clerkship?	11 (42.3)	9 (34.6)	4 (15.4)	1 (3.8)	0 (0)
Part. B: Course material					
Points of evaluation	Strongly agree, %	Agree, %	Uncertain, %	Disagree, %	Strongly disagree, %
Are you satisfied with the clarity of clerkship course outline?	5 (19.2)	13 (50)	6 (23.1)	2 (7.7)	0 (0)
Was the content of the material appropriate?	7 (26.9)	13 (50)	3 (11.5)	3 (11.5)	0 (0)
Was the quantity of material course appropriate?	9 (34.6)	12 (46.1)	3 (11.5)	1 (3.8)	3.8
Was the quality of material course appropriate?	8 (30.8)	13 (50)	3 (11.5)	2 (7.7)	0 (0)
Was the quantity of homework appropriate?	10 (38.5)	15 (57.7)	1 (3.8)	0 (0)	0 (0)
Were the types of homework appropriate?	12 (46.1)	13 (50)	1 (3.8)	0 (0)	0 (0)
Are you satisfied about the daily activities during clinic training?	7 (26.9)	11 (42.3)	5 (19.2)	3 (11.5)	0 (0)
Are you satisfied about the daily activities during the inpatient training?	9 (34.6)	8 (30.8)	7 (26.9)	1 (3.8)	1 (3.8)

Psychopharmacology games

Students' attitudes towards the inclusion of games in the clerkship were highly positive (Table 2). They were satisfied with the content, format and helpfulness of the

games in addition to all other point of games' evaluations. The most preferred game was "guess the drug's name", which scored the highest vote (88%).

Table (2)

Student’s evaluation of psychopharmacology games use during the psychiatry clerkship (n=29)

Points of evaluation	Strongly agree N (%)	Agree N (%)	Uncertain N (%)	Disagree N (%)	Strongly disagree N (%)
Was the content of the games appropriate?	20 (69)	9 (31)	0 (0)	0 (0)	0 (0)
Did you enjoy these educational games?	24 (83)	5 (17)	0 (0)	0 (0)	0 (0)
Did the games provide a good review for the material?	21 (72)	8 (28)	0 (0)	0 (0)	0 (0)
Was the difficulty level appropriate?	12 (41)	15 (52)	0 (0)	0 (0)	2 (7)
Were the games helpful for you?	18 (62)	11 (38)	0 (0)	0 (0)	0 (0)
Were the format and structure of the games appropriate?	17 (59)	10 (35)	1 (3)	1 (3)	0 (0)

Attitudes towards psychiatry

The responses for all parts of "Attitude towards Psychiatry Questionnaire" were simplified by combining the different levels of ‘agree’ choices and, similarly, for the different levels of "disagree" choices.

Balon Attitudes towards Psychiatry

Table 3 summarizes students’ attitudes towards psychiatry according to questions adapted from “Balon Attitudes towards Psychiatry”.

**Table (3)
Students' responses for “Balon attitudes towards psychiatry”**

Overall merits of psychiatry					
Question	Baseline agree %, baseline disagree % respectively	Follow-up agree %, Follow-up disagree % respectively	Baseline (mean)	Follow-up (mean)	P-value
Psychiatric research has made good strides (steps) in advancing care of the major mental	100, 0	95, 5	3.25	3.60	0.031 *

disorders					
Psychiatry is a rapidly expanding frontier of medicine	95, 5	85, 15	3.15	3.25	0.666
Psychiatry is unscientific and imprecise (unspecific)	25, 75	30, 70	2.80	3.00	0.385
Specific Pharmacy School factors					
Teaching of psychiatry at my Pharmacy School is interesting and of good quality	85, 15	85, 15	3.25	3.50	0.309
During my psychiatry rotation, psychiatry residents were good role models	90, 10	90, 10	3.00	3.35	0.130
Attending psychiatrists during my psychiatry rotation were good role models	95, 5	95, 5	3.15	3.50	0.110
Most psychiatrists at my Pharmacy School are clear, logical thinkers	85, 15	95, 5	3.05	3.45	0.042*
Most non-psychiatry staff at my Pharmacy School are respectful of psychiatry	95, 5	90, 10	3.15	3.45	0.083
Although I am interested in psychiatry, no effort was made to encourage my becoming a psychiatrist at my Pharmacy School	70, 30	40, 60	2.15	2.75	0.036*
Sum	-----	-----	26.90	29.55	0.026*

*Significant values

Students assessed all items related to overall merits of psychiatry and the specific factors related to the School of

Pharmacy, both at baseline and after the clerkship, in a favorable manner. The baseline score was 26.90

(SD=2.65), while at the end of the course it increased to 29.55 (SD=3.80) with overall significant improvement (P=0.026). Specifically, students' views about psychiatric research, psychiatrists at and psychiatry training, effort at the School of Pharmacy improved significantly (P=0.031, 0.041 and 0.036, respectively) at follow-up.

ATP- 30

Table 4 summarizes students' attitudes towards psychiatry according to question adapted from "ATP-30". The total baseline ATP-30 score was 57.80 (SD=6.14) with significant increase to 62.25 (SD =7.76) (P=0.041) at the end of the training.

Table (4)
Participating PharmD students' response for "ATP- 30"

Attitude to psychiatry and mental illness					
Question	Baseline agree %, baseline disagree % respectively	Follow-up agree %, Follow-up disagree % respectively	Baseline (mean)	Follow-up (mean)	P-value
Psychiatry is unappealing (not interesting) because it makes so little use of pharmacy training	20, 35	25.6, 60	3.2	3.4	0.287
On the whole, people taking up psychiatric training are running away from participating in real medicine	45, 40	40, 40	3.0	3.2	0.360
Psychiatry is a respected branch of medicine	90, 0	85, 5	4.3	4.2	0.331
Psychiatry has very little scientific information to go on	20, 35	25, 55	3.2	3.3	0.644
These days, psychiatry is the most important part of the curriculum in pharmacy schools	40, 40	40, 15	3.0	3.4	0.090
Psychiatry is so unscientific that that even psychiatrists can't agree as to what its basic applied sciences are	30, 55	20, 75	3.2	3.7	0.004*
Most of the so-called facts in psychiatry are really just vague speculations	35, 10	25, 50	2.7	3.4	0.012*
The practice of psychiatry allows the development of really rewarding relationships with people	80, 0	80, 0	3.9	4.1	0.453
Psychiatry is so amorphous that it cannot really be taught effectively	60, 15	30, 45	2.3	3.4	0.004*
Psychiatric illness deserves at least as much attention as physical illness	100, 0	85, 0	4.6	4.5	0.429
It is interesting to unravel the cause of mental illness	80, 0	95, 5	4.3	4.5	0.360
Attitudes to institutions					
Psychiatric hospitals are a little more than prisons	60, 20	30, 55	2.3	3.5	0.008*
Psychiatric hospitals have a specific contribution to make to the treatment of the mentally ill	75, 0	65, 15	3.9	3.7	0.398
Attitudes to psychiatric teaching and as a career					

Psychiatric teaching increases our understanding of medical and surgical patients	75, 15	85, 5	3.9	4.1	0.309
The majority of students report that their psychiatric undergraduate training has been valuable	80, 0	100, 0	4.0	4.4	0.004*
I would like to be a psychiatrist	25, 35	25, 55	2.9	2.7	0.707
If I were asked what I consider to be the three most exciting medical specialties, psychiatry would be excluded	30, 45	35, 45	2.9	2.8	0.908
Sum			57.8	62.2	0.041*

*Significant values

Students' view about psychiatric science (questions 6, 7 and 9) significantly improved after the clerkship ($P < 0.005$). In addition, students' view towards psychiatric hospital setting, as well as the value of their training (questions 12 and 15, respectively) also significantly improved ($P=0.008$ and 0.004 , respectively) at the follow-up.

MICA

Table 5 summarizes students' attitudes towards psychiatry according to questions adapted from MICA. The baseline score was 26.45 (SD=4.96) with no significant change at the end of the rotation [26.75 (SD =3.88) ($P=0.715$)]. Students' answer regarding admitting having mental illness to their colleague (question 3) received lower score after the clerkship ($P=0.001$).

Table (5)
Participating PharmD Students' responses to psychiatry stigma according to MICA

Attitude to psychiatry and mental illness					
Question	Baseline agree %, baseline disagree % respectively	Follow-up agree %, Follow-up disagree % respectively	Baseline (mean)	Follow-up (mean)	P-value by paired t-test
If I had a mental illness I would never admit this to any of my friends for fear of being treated differently	65., 35	80., 20	3.8	4.3	0.220
People with a severe mental illness are dangerous more often than not	85., 15	65., 35	4.3	4.0	0.260
If I had a mental illness I would never admit this to any of my colleagues for fear of being treated differently	65., 35	90, 10	3.9	4.9	0.001*
If a psychiatrist asked me to treat people with a mental illness in a disrespectful manner, I would not follow their instructions	65., 35	65, 35	2.8	2.8	0.917
I feel as comfortable talking to a person with a mental illness as I do those with physical illness	70, 30	70, 30	3.0	2.7	0.217

The public does not need to be protected from people with a severe mental illness	20, 80	25, 75	4.2	3.9	0.506
I would use the terms 'crazy', 'nutter', 'mad' etc. to describe people with a mental illness who I have seen in my work	5, 95	10, 90	2.0	1.9	0.755
If a colleague told me they had a mental illness I would still want to work with them	90, 10	90, 10	2.2	2.2	0.893
Sum			26.4	26.7	0.715

*Significant values

Interest, knowledge of psychiatry and psychiatry as a career The pre-clerkship means for students' interest, knowledge of psychiatry, and psychiatry as a career were 7.85 ± 2.21 , 5.2 ± 2.42 and 4.4 ± 3.13 (all out of 10), respectively, while after the clerkship the values changed to 7.65 ± 2.35 , 7.7 ± 1.56 and 4.45 ± 3.49 (all out of 10), respectively, reaching significant difference only for the level of knowledge in psychiatry, $P < 0.001$.

Discussion

The success of any course can be measured by different methods, the most fundamental of which is students' satisfaction.²⁶ In general, this study shed the light on the importance of inclusion of psychiatry clerkship in clinical training of PharmD students. Moreover, capturing students' interest and involving them in the learning process is a fundamental issue in clinical practice. This study evaluated the role of team work (i.e.- games) in stimulating thought processes and generating enthusiasm.¹⁹

Satisfaction with the Clerkship

The most satisfactory part in students' feedback about the clerkship was the "course helpfulness". Students felt that they had a good experience in dealing with psychiatric cases, a good indicator of the achievement of the main objectives of the course. Most of the students were satisfied with the course material, especially about assignments which were an important teaching tool that enabled students to practice their knowledge.²⁷ other studies also indicated that assignments could improve

students' academic development and prepare them for future job.²⁸

Students were similarly satisfied with clerkship hands-on activities. Hands-on activities were being reported as a trigger for students' creativity, attitude and desire to learn as compared to traditional teaching method.^{29,30}

Psychopharmacology games

The game-format approach aroused students' interest and made their engagement in the learning process a more enjoyable experience. The games gained high satisfaction among the majority of students. Similar results were observed in other studies that used games in different areas of medical education.¹⁹⁻²¹

Attitude towards psychiatry

Despite continuous efforts by individuals, groups, or institutions such as the World Health Organization to modify views about mental illness stigma, this stigma still exists³¹⁻³² and affects trainees' decision making.³⁴ Pharmacists should know that stigma and negative attitudes towards mental illness may affect the quality of care they provide to their patients.³⁵

Our data is consistent with other studies indicating that pharmacy students¹² and pharmacists¹³ generally had favorable attitudes towards patients with mental illness. Students showed positive attitudes towards the overall merit of psychiatry both before and after the clerkship.

The improvement in attitude towards psychiatry and mental illness among PharmD students was consistent

with findings of a previous study of attitude towards psychiatry following active learning psychopharmacology course¹⁵ using the ATP 30 scale. On the other hand, no previous studies had investigated the impact of psychiatric course on PharmD students' attitude towards psychiatry based on the Balon Attitudes towards Psychiatry questionnaire.

Regarding psychiatry stigma, students showed mixture of positive and negative attitudes towards different questions. Although different parts in MICA questionnaire improved after the clerkship, no significant change was observed regarding students' stigma towards psychiatry at the follow up. This could be attributed to the small number of the study participants or to specific cultural factors that could not be affected by a short training clerkship. More contact time with mental illness patients is needed to improve the negative pharmacy students' stigma towards those patients. Future studies aiming at investigating the reasons of this negative stigma may help reveal this problem and future solutions could be implemented based on that.

Career Knowledge and Interest

It has been shown that stigma of psychiatric conditions may affect preferring psychiatry as a career.³² No previous studies were conducted regarding selection of career in psychiatry by clinical pharmacists and the factors that affect this choice. In this study, interest in psychiatry was high at the baseline and this could be the reason why it did not significantly change after the clerkship.

Knowledge in psychiatry significantly improved at the end of the clerkship in comparison to the first day. A study among medical students reported similar results regarding knowledge improvement in psychiatry despite lower interest in psychiatry than that in our study.³⁶

Limitations of the Study

The results of this study should be discussed in the light of its limitations. The study is confined to only one university in Jordan that could affect the results and may impede their generalization. In addition, a higher sample size could be needed for more accurate results. Future studies on more students, with more preceptors involved and at other Schools of Pharmacy are strongly encouraged.

Our study measured only short-term impact of the clerkship, whereas a long-term impact measures such as the feedback of the graduate students in addition to employers' feedback about the benefits of the clerkship are needed to assess its persistent effect. Therefore, a long-term follow-up should be considered in future work. On the other hand, direct comparisons to previous studies conducted elsewhere were difficult due to differences in the methodologies of the studies and the level of training of the participants.

Finally, our study did not differentiate between students' attitude toward different mental illness such as bipolar and schizophrenia where there may be a diversity in students' opinion regarding different psychiatric disorders.

Compliance with Ethical Standards

The work was carried out in accordance with the Declaration of Helsinki and other relevant regulations. There were no risks to human subjects. Informed consent was obtained from all individual participants included in the study.

Students were asked to complete the questionnaire on a voluntary basis. They were assured that information they provided would remain confidential and their identity would not be disclosed, and that if they chose not to participate, they would not be penalized.

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None.

Conflict of Interest

The authors declare that they have no conflict of interest.

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تأثير ادخال التدريب السريري للطب النفسي على تصورات طلاب دكتور صيدلة للصحة العقلية و الوصم: دراسة تدخل تجريبية من الأردن

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ملخص

يعتقد أن تدريس مادة الطب النفسي يمكنها أن تحسن من التواصل ما بين الصيادلة والمرضى النفسيين. وتهدف هذه الدراسة الاستطلاعية إلى تقييم ووصف تأثير دراسة هذه المادة على اتجاهات وتصورات الطلاب تجاه الطب النفسي والمرضى النفسيين والوصمة المحيطة بهذا المجال. وقد أجري استطلاع في الجامعة الأردنية لتقييم التغذية الراجعة لتصورات طلبة دكتور في الصيدلة فيما يتعلق بشأن التدريب في وحدة الطب النفسي في مستشفى الجامعة الأردنية لمدة أسبوعين، المسابقات التي تهدف الى تقييم استيعاب المادة من قبل الطلاب وتقييم تصورات واتجاهات الطلاب تجاه الطب النفسي. واعتمد الاستبيان على استخدام ثلاث مقاييس وهي مقياس Balon نحو الطب النفسي، مقياس MICA ومقياس ATP-30. كما وتم استخدام المسابقات كأداة تعليمية في تدريس مادة الطب النفسي. وقد قام جميع الطلبة والبالغ عددهم تسع وعشرون طالباً بتعبئة الاستبيان. وقد أظهرت الدراسة رضا الطلاب بنسبة كبيرة تجاه مادة الطب النفسي والمسابقات الطبية التي تم إجراؤها. كما وأظهر الطلاب موقفاً إيجابياً قبل بداية التدريب والذي تحسن بعد تدريبهم في وحدة الطب النفسي. كما وأبدت الدراسة مزيجاً من المواقف الإيجابية والسلبية تجاه الوصمة المحيطة بالطب النفسي والتي لم تتحسن بنسبة كبيرة بعد انتهائهم من التدريب. أعطت الدراسة فكرة أن وجود مادة الطب النفسي في الخطة الدراسية لتخصص دكتور في الصيدلة ساعد على تحسين مواقف ومفاهيم صيادلة المستقبل تجاه الطب النفسي.

الكلمات الدالة: تدريب سريري، الأردن، الصحة العقلية، دكتور صيدلة، الطب النفسي، وصمة العار.

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