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Original Research

Student-created vignettes to enhance pharmacy student knowledge and skill in managing patients with neuropsychiatric disease

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Abstract

Backgound: Neuropsychiatric disease is common globally. It is vital train pharmacists to provide patient-centered care in neuropsychiatry. **Objective:** To evaluate the impact of student-created vignettes on their knowledge and abilities to assess and manage patients with neuropsychiatric diseases, and to evaluate their experience. **Methods:** Several learning/assessment methodologies within the Therapeutics III course were utilized, including a major assignment of student-created vignettes about neuropsychiatric diseases. A framework guided student in creating the vignettes; identifying conception, design, and administration. Created vignettes were evaluated based on a validated scoring guide. Mean scores in various assessments were compared using Spearman's rank-order correlation. Students evaluated their experience on a 5-point Likert-type scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. **Results:** Overall, students' performance in the assignment was excellent, average score = 92%. A significant correlation existed between the vignette assignment and assessments covering neuropsychiatric disease. Most students agreed they were made aware of what needed to be done (95%), that the instructions about elements to include, designs, and delivery mechanisms were enough (93.4%, 86.7%, and 93.4%, respectively). Most students agreed that developing the vignette was stimulating, engaging and enjoyable (93.3% and 90%, 88.3% respectively). Students stated they felt confident in their scientific background knowledge (88.3%), in employing communication strategies with patients (85%) and their families (83.3%), and in their confidence in promoting and supporting patients with the diseases. **Conclusion:** Students attained high scores in the vignette assignment and reported positive experience, satisfaction and confidence. Best practices guided students in creating and evaluating the vignettes, which made them an effective learning/assessment tool.

Keywords: telemedicine; willingness to use; pharmacy students; psychometric; Indonesia

INTRODUCTION

Many of mental disorders share similar pathophysiology in brain, behavior and motor mechanisms, and present with common features, therefore, using the term "neuropsychiatric disorders" to describe both psychiatric and neurologic disorders has been practiced widely by clinical psychiatrists and neurologists.[1] This terminology may be associated with reduced discrimination against patients with psychiatric disease while also reducing mortality in severe illness.[2] In addition, the NIH identifies psychiatric and neurologic diseases collectively as "neuropsychiatric disorders" when reporting disability adjusted life years (DALYs) associated with chronic diseases.[3,4] Neuropsychiatric disease is common globally, it is estimated that approximately one in four individuals suffer from a psychiatric disorder and one in six suffer from a neurologic condition.[5,6] Neuropsychiatric diseases are considered a major cause of disability in countries like the United States, being ahead of cardiovascular disease.[7] Neuropsychiatric disease is also expensive, however research has shown that diagnosing and managing the disease could improve productivity and health outcomes and decrease costs.[8] Widespread screening and referral for early diagnosis and treatment of neuropsychiatric diseases have been advocated to reduce the burden and morbidity from these conditions.[9]

Globally, the International Pharmaceutical Federation has urged members in its "human resource development policy" that an increase by 20% of service coverage by pharmacists for severe mental disorders can be achieved.[10] Pharmacists are providing patient-centered care that requires them to acquire knowledge and skills in recognizing and treating a variety of diseases including neuropsychiatric conditions.

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Pharmacy curricula exist for numerous therapeutic areas such as oncology, pharmacogenomics, pediatrics, geriatrics, etc, but not for psychiatry or neurology.[11,12] To help educate and train students in the area, a recommended set of outcomes for students that could be adopted for curricular development in neuropsychiatric conditions has been suggested[13]: 1. Analyze the types of neurological and psychiatric emergencies and the actions necessary to improve patient outcomes (eg. prevent status epilepticus, prevent a suicide attempt). 2. Given a patient with a psychiatric or neurologic disorder, evaluate issues of social, culture, family and economics that impact access to care and engagement in treatment. 3. Analyze how pharmacodynamics, pharmacokinetics, pharmacogenomics and medicinal chemistry impact personalized care of individuals with psychiatric and neurologic disease. 4. Evaluate the role of the pharmacist as educators in prevention and recognition of psychiatric and neurologic disorders and in counseling on psychotropic and neurologic drugs. 5. Analyze and provide solutions for the multiple mechanisms that can cause harm in patients with psychiatric and neurologic disease (prevent drug toxicity or drug overdose).[13]

In research contexts vignettes are "descriptive episodes of specific situations that simulate real events or problems that are usually presented in written or visual formats. The episodes might be about people, situations, or events."[14] A common purpose for using vignettes is to encourage discussions and understand beliefs, feelings, attitudes and possibly actions about a particular issue. Visual vignettes may include video recordings, images or cartoons based on 'real-life' events, which can induce a thought process and/or discussion. It was suggested that vignettes could generate rich information that are easier for participants to understand.[15] It is also believed that vignette assessment tasks associated with analyzing/evaluating and problem solving in a vignette, is effective for assessing what and how learning occurs.[16] Therefore, vignettes have been used as a tool to understand concepts, study behavior and illicit dialogue and problem solving.[15]

To address growing needs to train pharmacists in neuropsychiatry, a new module to achieve suggested curricular outcomes in neuropsychiatric conditions was introduced in Therapeutics III[13]; one of course series covering pharmacotherapy of disease in the BPharm program at Ajman University, College of Pharmacy and Health Sciences. Active teaching/learning and assessment strategies were utilized in the course including case discussions, an oral exam, role play, practicing neuropsychiatry screening/assessment tools, and a major assignment of student-created vignettes related to neuropsychiatry. The overall objective of this study was to evaluate the impact of student-created vignettes in neuropsychiatry on students' knowledge and abilities to recognize, assess, support, and assist patients with neuropsychiatric diseases, and to compare student performance in the vignette assignment to other course assessments. Additionally, the study aimed to evaluate student experience with creating their own vignettes, and assess their satisfaction with the activity and confidence with performing tasks related to managing patients with neuropsychiatric diseases.

METHODS

Ethical considerations: Institutional Review Board approval to conduct the study was obtained before the conduct of the study. [Ref No. P-F-H-2020-Jun-28]

The neuropsychiatry module consisting of 10 lectures and six tutorial workshops constituted two thirds of the Therapeutics III course; the rest of the course covered non-neuropsychiatric conditions of musculoskeletal diseases such as osteoporosis, gout, osteoarthritis and rheumatoid arthritis. In addition to traditional lecturing, students were exposed to a variety of active learning/assessment methodologies including: case discussions and an oral exam covering pain management, tools for screening/assessment of psychiatric disease, role play for non-neuropsychiatric conditions, student-created vignettes for neuropsychiatric diseases, a Midterm and a Final examination.

The flashcards as a study tool on AccessPharmacy database by McGraw Hill was used to introduce cases for discussion during tutorial sessions about pain and migraine headaches. Subsequently, an oral exam related to these case discussions was individually administered to students. This assessment was worth 10% of the total course grade. Furthermore, during tutorial time, students learnt skills in screening and assessing patients with psychiatric disorders such as Generalized Anxiety Disorder (GAD), depression, and schizophrenia using various screening/assessment instruments.[17-19] For each condition, firstly, students watched a short video showing a patient with varying severity of the disease, then they used the instruments to screen/assess the patient in the video. Subsequently, students presented their findings (diagnosis and severity assessment), supported by evidence from the video. This assessment contributed 10% of the total course grade.

For assessment of non-neuropsychiatric conditions (musculoskeletal conditions) covered in the course, students role played "patients" suffering from various musculoskeletal conditions and visiting "community pharmacists" for refill of their previously prescribed medications. Students were graded based on their handling of the "patient". This assessment was worth 10% of the total course grade.

Lastly, as a major assignment in the course, students created their own vignettes to address all learning outcomes related to neuropsychiatric disease. The vignette framework proposed by Skilling et al.,[14] was used as a guide for students and to achieve methodological consistency in creating the vignettes; the framework identified three key elements for vignette construction (conception, design, and administration), supplemented by characteristics for each element and descriptions. The key element of 'conception' included characteristics that are central to the concerned phenomena and the aims of the presentation including: the content, realistic and hypothetical portrayals, and purpose/function. The key element of 'design' included practical aspects of vignette construction including: presentation, length, settings and terminology, open or closed questioning, participant perspectives, and piloting. The third key element of the framework was 'administration' of the vignette and the

opportunities for participants to give feedback. This included: instructions, timing and responses, and delivery mode and frequency.[14]

A list of the conditions to be covered in this assignment was organized alphabetically, and these included neurological conditions of Alzheimer's disease, epilepsy and Parkinson's disease while the psychiatric conditions included anxiety, bipolar disease, depression and schizophrenia. Students worked in groups of three to create their own vignettes, and were randomly assigned their topic by sequentially matching the student list with the topic list. Students were given the option to develop the vignettes as text, video or audio and were given a four-week period to submit their work. Created vignettes were evaluated by the course instructor as well as other students based on the scoring guide for developing vignettes by Jeffries.[16] Accordingly, the vignettes were scored based on four categories of Presentation, Accuracy, Scope and Defense / Summary; each category was associated with descriptors that were graded from 0 = extensive errors; missing most or all of scope component, to 3 = addresses all parts of the question; describes the problem or issue and gives a viable resolution, explanation, and analysis; includes a clear and focused statement of agreement or disagreement, Table 1.

Table 1. Scoring guide for Vignettes

Category / Subscore	**Description**
Presentation	
2	Uses appropriate, correct, and clear language, phrasing, and grammar
1	Includes some errors and/or some lack of clarity
0	Includes extensive errors and inaccuracies; general lack of clarity
Accuracy	
2	Portrays and interprets the information and content accurately
1	Includes some errors; minimal portrayal or interpretation present
0	Includes extensive errors; little or no portrayal or interpretation present
Scope	
3	Addresses all parts of the question; includes appropriate references to readings, theory, and research; addresses at least two points of view when appropriate
2	Missing a few of the necessary scope components
1	Missing many of the necessary scope components
0	Missing all or most of the scope components
Defense / Summary	
3	Describes the problem or issue and gives a viable resolution, explanation, and analysis; includes a clear and focused statement of agreement or disagreement when appropriate; includes relevant evidence in support of the viewpoint(s) presented; provides relevant, accurate definitions and examples of key terms
2	Missing a few of the necessary defense components
1	Missing many of the necessary defense components
0	Missing all or most of the defense components
Total Score (10 points possible)	
Grading Scale:	
	9–10 A
	8 B
	6–7 C
	5 D
	0–4 F

The scoring guide was shared with the students as part of the instruction packet on how to create the vignettes. One tutorial session was dedicated to train students on learning outcomes to be covered, choosing a design for the vignette, and on the assessment using the framework and scoring guide.[14,16] Additionally, students reviewed a model script and an associated video vignette against framework components / elements and the scoring guide. The vignette assignment contributed 20% of the total course grade (10% by the course instructor plus 10% by students).

The remaining assessments in the course were the Midterm and Final exams which were traditional assessments in the format of a mix of multiple choice (MC) and text-type questions, covering the same disease states discussed earlier. The Midterm and Final exams were worth 20% and 30 % of the total course grade respectively.

Other evaluations

Students evaluated their *experience* in developing the vignette assignment under the domains of *Awareness of Content and Process*, and *Gained benefits* on a 5-point Likert-type scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. For *Awareness of Content and Process*, students evaluated being made aware of what they needed to do before developing the vignette; being given enough information on what elements to include; if enough instructions were given on possible designs to use, if clear instructions were given on possible administration and delivery mechanisms, and if the time given to develop the vignette was adequate. For *Gained benefits*, students evaluated whether the assignment enhanced their knowledge about neuropsychiatric diseases, if it gave them a chance to enhance their counseling skills as pharmacists, if being worth 10% of the final grade was appropriate, if it was a fair assessment; and if it was comparable to traditional assessments in terms of required effort.[20,21] Moreover, students evaluated their *satisfaction* with creating the vignettes, including if they were satisfied with creating the vignette as an educational and assessment tool, if creating the vignette was stimulating, engaging and worth their time, if they enjoyed being assessed on creating the vignette, and if they look forward to creating more vignettes in future courses.[21]

Finally, students evaluated their *confidence* in recognizing, assessing, assisting and counseling patients with

neuropsychiatric diseases including their background knowledge, ability to assess patients, familiarity with screening instruments, ability to identify behaviors typically exhibited in neuropsychiatric diseases, ability to promote a "shame free" / "stigma free" environment with patients, listening and interacting without expressing judgment, communication strategies to effectively counsel patients, providing patient education, communication strategies with family members, and knowledge of nonpharmacological and pharmacological management of neuropsychiatric diseases.[22]

SPSS version 28 was used for data analysis. Continuous variables such as students' scores in various assessments were presented as means and standard deviations (SD), while ordinal variables such as students' agreement with statements about the experience in course activities, satisfaction and confidence in the course were presented using counts and frequencies. Cronbach alpha for items related to experience, satisfaction and confidence was used to establish internal reliability, a value ≥ .07 was considered acceptable.

Spearman's rank-order correlation coefficient was used to test the correlation between students' performance in various assessments in the course. A p-value <0.05 was considered statistically significant.

RESULTS

All 60 enrolled students undertook all assessments and completed the post-course surveys. Average scores and percentage average scores obtained by students for all assessments were reported in Table 2. Overall, students' performance was good, with an overall course average of 74%. Eleven students (18.3%) achieved at least a B+ (85-100%), whereas 31 (51.7%) scored between B and C grades (70-84%). A significant positive moderate correlation (r=0.341, p=0.008) existed between the vignette assignment and the oral exam. Similarly, a significant strong positive correlation (r=0.613 and 0.517, p<0.001) existed between the vignette and Midterm and Final exams, respectively. While the correlation with the psychiatry screening was not statistically significant, but approaching significance (r=0.228, p=0.080). For the role-play assessment, no significant correlation existed (r=0.029, p=0.829).

Table 3 reports students' feedback on their experience with the vignette assignment. Overall, results show positive perceptions. The majority of students agreed that they were made aware of what was needed to be done (95%), and that the time given to develop the vignette was adequate (88.3%). They also agreed that the instructions given about elements to include, designs, and delivery mechanisms were enough (93.4%, 86.7%,

Table 2. Student performance on various course assessments and correlation between vignette assignment and other assessments

Assessment Tool (Weight %)	Grade Average (SD)	Grade Average (%)	Correlation between Vignettes and Other Assessments (r)	*p*-value
Vignette (20)	18.392 (1.239)	91.96	1	-
Role Play (10)	7.854 (0.227)	78.54	0.029	.829
Oral Exam (10)	8.767 (0.491)	87.67	0.341	.008*
Psychiatric Assessments (10)	8.650 (1.133)	86.50	0.228	.08
Midterm Exam (20)	13.442 (3.071)	67.21	0.613	<.001*
Final Exam (30)	20.00 (5.887)	66.76	0.517	<.001*
Total (100)	74.043 (9.490)	74.04	-	-

*Statistical significance defined as *p* <.05

Table 3. Student experience in the vignette assignment

Item	Number (%) of Responses for Each Item					M (SD)
	1= Strongly Disagree	2= Disagree	3= Neutral	4= Agree	5= Strongly Agree	
Awareness of Content and Process						
I was made aware of what I needed to do before I was engaged in developing my vignette	1 (1.7)	1 (1.7)	1 (1.7)	13 (21.7)	44 (73.3)	4.6 (0.8)
Enough instruction was given to me by the instructor on what elements to include in my vignette	0 (0.0)	1 (1.7)	3 (5.0)	7 (11.7)	49 (81.7)	4.7 (0.6)
Enough instruction was given to me by the instructor on possible designs I may use in developing my vignette	0 (0.0)	3 (5.0)	5 (8.3)	12 (20.0)	40 (66.7)	4.5 (0.9)
Clear instruction was given to me on possible administration and delivery mechanisms I may use in my vignette	0 (0.0)	1 (1.7)	3 (5.0)	19 (31.7)	37 (61.7)	4.5 (0.7)
The time given to me to develop the vignette was adequate	0 (0.0)	2 (3.3)	5 (8.3)	17 (28.3)	36 (60.0)	4.5 (0.8)
Gained Benefits						

The process of developing the vignette enhanced my knowledge about neuropsychiatric diseases	0 (0.0)	1 (1.7)	2 (3.3)	17 (18.3)	40 (66.7)	4.6 (0.6)
The process of developing the vignette helped me focus on important information	0 (0.0)	2 (3.3)	4 (6.7)	13 (21.7)	41 (68.3)	4.6 (0.8)
The process of developing a vignette gave me a chance to enhance my counseling skills as a pharmacist	0 (0.0)	4 (6.7)	5 (8.3)	12 (20.0)	39 (65.0)	4.4 (0.9)
The vignette being worth 10 of the course grades was appropriate	0 (0.0)	1 (1.7)	7 (11.7)	17 (28.3)	35 (58.3)	4.4 (0.8)
Developing a vignette was a fair assessment	1 (1.7)	0 (0.0)	6 (10.0)	13 (21.7)	40 (66.7)	4.5 (0.8)
Developing a vignette was comparable to traditional assessments in terms of required effort	0 (0.0)	5 (8.3)	6 (10.0)	11 (18.3)	38 (63.3)	4.4 (1.0)

Cronbach's Alpha = 0.89

and 93.4%, respectively). Eighty-five percent of the students stated that they benefited from developing the vignette, as it enhanced their knowledge about neuropsychiatric diseases and their counseling skills. Additionally, the majority (81.6%) stated that the effort needed to develop the vignette was comparable to that of traditional assessments. Cronbach alpha coefficient of 0.89 indicated a high degree of reliability between all items.

Table 4 reported students' satisfaction with the vignette as a learning/ assessment tool. The vast majority of students agreed that developing the vignette was stimulating, engaging and enjoyable (93.3% and 90%, 88.3% respectively). Likewise, 90% of students stated that they look forward to develop vignettes in the future. Cronbach alpha coefficient of 0.95 indicated a high degree of reliability between all items.

Students' feedback on their confidence in managing patients with neuropsychiatric disease was reported in Table 5. The majority of students stated they felt confident in their scientific background knowledge (88.3%), in employing communication strategies with patients with neuropsychiatric diseases (85%) and their families (83.3%), in their confidence in promoting and supporting patients with the diseases: "I feel confident of being able to promote a shame-free/stigma-free environment with patients" (93.3%), "I feel confident to listen to and interact with a person without expressing judgment about their illness" (90%). They also felt confident in the knowledge about nonpharmacological (86.7%) and individualized pharmacological (88.4%) management of neuropsychiatric diseases. Cronbach alpha coefficient of 0.95 indicated a high degree of reliability between all items.

Table 4. Student satisfaction with the vignette assignment

Item	**Number (%) of Responses for Each Item**					
	1= Strongly Disagree	**2= Disagree**	**3= Neutral**	**4= Agree**	**5= Strongly Agree**	**M (SD)**
I am satisfied with the vignette as an educational and assessment tool	0 (0.0)	2 (3.3)	3 (5.0)	12 (20.0)	43 (71.7)	4.6 (0.7)
Developing the vignette as an educational and assessment tool was stimulating	0 (0.0)	1 (1.7)	3 (5.0)	14 (23.3)	42 (70.0)	4.6 (0.7)
Developing the vignette as an educational and assessment tool was engaging	0 (0.0)	0 (0.0)	6 (10.0)	12 (20.0)	42 (70.0)	4.6 (0.7)
I enjoyed being assessed on developing the vignette as an educational and assessment tool	0 (0.0)	3 (5.0)	4 (6.7)	11 (18.3)	42 (70.0)	4.5 (0.8)
Developing the vignette as an educational and assessment tool was worth my time	0 (0.0)	2 (3.3)	4 (6.7)	9 (15.0)	45 (75.0)	4.6 (0.8)
I look forward to involving in developing vignettes as an educational and assessment tool in the future	0 (0.0)	3 (5.0)	3 (5.0)	12 (20.0)	42 (70.0)	4.6 (0.8)

Cronbach's Alpha = 0.95

Table 5. Student confidence in screening and managing patients with neuropsychiatric diseases post vignette assignment

Item	**Number (%) of Responses for Each Item**					**M (SD)**
	1= Strongly Disagree	**2= Disagree**	**3= Neutral**	**4= Agree**	**5= Strongly Agree**	
I feel confident in my scientific knowledge of neurological and mental diseases	0 (0.0)	2 (3.3)	8 (13.3)	15 (25.0)	35 (58.3)	4.4 (0.8)
I feel confident in being able to assess a patient with mental health	1 (1.7)	4 (6.7)	5 (8.3)	19 (31.7)	31 (51.7)	4.3 (1.0)
I am familiar with several mental health instruments (i.e. tools, materials, surveys) that would help me identify a patient with mental illness	0 (0.0)	0 (0.0)	5 (8.3)	18 (30.0)	37 (61.7)	4.5 (0.7)
I am able to identify behaviors that are typically exhibited by people with mental illness	0 (0.0)	1 (1.7)	3 (5.0)	17 (28.3)	39 (65.0)	4.6 (0.7)

I feel confident of being able to promote a "shame-free"/ "stigma-free" environment with patients	0 (0.0)	1 (1.7)	3 (5.0)	13 (21.7)	43 (71.7)	4.6 (0.7)
I feel confident to listen to and interact with a person without expressing judgment about their illness	0 (0.0)	1 (1.7)	5 (8.3)	15 (25.0)	39 (65.0)	4.5 (0.7)
I feel confident of communication strategies that I could use to effectively counsel a patient with neurological and mental illness	0 (0.0)	2 (3.3)	7 (11.7)	14 (23.3)	37 (61.7)	4.4 (0.8)
I feel confident in providing patient education related to neurologic and psychiatric diseases	0 (0.0)	1 (1.7)	8 (13.3)	15 (25.0)	36 (60.0)	4.4 (0.8)
I feel confident of communication strategies with family members of patients with neurologic and psychiatric diseases	0 (0.0)	1 (1.7)	9 (15.0)	12 (20.0)	38 (63.3)	4.5 (0.8)
I feel confident of knowledge in nonpharmacological management of neurologic and psychiatric diseases.	0 (0.0)	1 (1.7)	7 (11.7)	12 (20.0)	40 (66.7)	4.5 (0.8)
I feel confident of knowledge in individualized pharmacological management of neurologic and psychiatric diseases	0 (0.0)	1 (1.7)	6 (10.0)	16 (26.7)	37 (61.7)	4.5 (0.7)

Cronbach's Alpha = 0.95

DISCUSSION

In this study, the recommended outcomes for curriculum and assessment developed by Dopheide et al., were adopted to guide curricular development in neuropsychiatric conditions within the Therapeutics III course.[13] Overall, students performed well in course activities, and assessments. Achieved scores in the student-created vignette assignment correlated well with assessments related to neuropsychiatric disease but not with those of another course content, which was expected. The scores also correlated with the Midterm and Final exam scores, likely due to coverage of neuropsychiatric disease in both exams. Notably, students evaluated each-others' vignettes using the same scoring rubric, and in this fashion, they applied their skills in developing the vignette, to other but similar contexts, hence, they practiced transferring their learning to new situations; a strong benefit of vignettes is to integrate knowledge and skills created from one context to another.[16] Moreover, by creating multiple vignettes covering multiple neuropsychiatric diseases, students were exposed to variable opportunities for "clinical" decision making; remarkably, the literature recommends exposing students to a variety of vignettes to enhance clinical decision making in various situations and contexts.[16]

Students evaluated their experience with creating the vignettes positively and highlighted several benefits from going through the experience. They also expressed their satisfaction with self-created vignettes and possibly connected more deeply with the material; they considered it engaging, stimulating, enjoyable, and looked forward to engaging in it as an educational/ assessment tool in the future. Furthermore, students reported being confident in all curricular outcomes designed for the course (which was supported by the high performance achieved in the vignette assignment) including screening, managing and counseling patients about their conditions which testified to the rigor and comprehensiveness employed in designing this activity. Vignettes have been considered a reliable educational tool due to their realistic and engaging nature, their ability to simulate the integration of knowledge across different disciplines, logical in flow, and their student-centered design.[23] Our findings, confirmed the role of vignettes in simulating discussions, critical thinking and problem solving in learning environments ,[16] with the expectation that they prepared students for clinical reasoning and decision-making through realistic clinical situations.[24] In neuropsychiatric disease, this will facilitate understanding real-life complexity and challenges involved in managing these patients. Additionally, in this study, students worked in groups to create the vignettes, and worked together to give feedback on each other's' created vignettes in an atmosphere of collaborative teamwork, confirming the great potential vignettes have in training students on multidisciplinary collaborations.[16]

Vignettes have showed effectiveness when employed as a learning technique for pharmacy students. Flowers et al., concluded Web-based multimedia vignettes on complex drug administration techniques have shown "considerable promise" in students learning to augment the training of pharmacy students in advanced community pharmacy practice experiences.[25] Similarly, Mnatzaganian et al., reported significant improvement in pharmacy students' knowledge and confidence in recognizing and assisting patients with low health literacy after undergoing a health literacy training program that included faculty-created video vignettes.[26] Similarly, Arif et al., reported that patient case video vignettes in conjunction with an interactive workshop, enhanced students' understanding of and comfort level with cross-cultural communications.[27] In our study, student-created vignettes addressed social and cultural contexts that impact care in neuropsychiatric disease; this was very crucial, considering the anonymity surrounding neuropsychiatric disease in many cultures including the local culture in this study.

One limitation in this study is that student performance on various vignettes related to the same disease state (using the same scoring rubric) were not compared in this study; comparing the scores may contribute to establishing reliability of the vignette in variable contexts representing a wide range of clinical experiences. This could be taken into consideration in future studies of multiple vignettes in learning/assessment in the future.

CONCLUSION

Students attained high scores in the vignette assignment

which correlated well with similar interactive and traditional assessments in the course. Students reported a positive experience with the vignette assignment, they were satisfied with it and declared confidence in assessing, supporting, assisting and counseling patients with neuropsychiatric disease. Collaborative student work and social/cultural considerations in neuropsychiatric disease surfaced as key elements in student experience. Best practices guided students in creating and evaluating the vignettes, which made them an effective learning/assessment tool.

FINANCIAL DISCLOSURES

None

CONFLICTS OF INTEREST

None

CREDIT STATEMENT

Sanah Hasan: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Project administration; Resources; Software; Supervision; Validation; Visualization; Writing - original draft; Writing - review & editing; Ahmed Gaili: Data curation; Formal analysis; Methodology; Software; Validation; Writing - review & editing; Wahbi Ghaouji: Data curation; Formal analysis; Methodology; Software; Validation; Writing - review & editing; Manar Alaa: Data curation; Formal analysis; Methodology; Software; Validation; Writing - review & editing

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